5-1972

Expressed Group Member Satisfaction and Measured Group Difference Between Trained and Untrained Group Members

Dennis Randall Kilstrom
Utah State University

EXPRESSED GROUP MEMBER SATISFACTION AND MEASURED GROUP DIFFERENCE BETWEEN TRAINED AND UNTRAINED GROUP MEMBERS

by

Dennis Randall Kilstrom

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF ARTS

in

Psychology

Approved:

UTAH STATE UNIVERSITY
Logan, Utah

1972

ACKNOWLEDGMENTS

I wish to express my heartfelt thanks and gratitude to:

The members of my committee, especially my chairman, Reed S. Morrill, who contributed many suggestions along with his time and patience. No value can be placed on his contribution to my professional development.

To my wife, Maxine, who had the fortitude and strength to suffer through these long years of my education. Her trials and burdens were many. My greatest hope and prayer is that I may become as strong as she is and as loving.

To my secretary, Wilma Hutchings, whose patience with my writing and spelling have resulted in a readable copy of my thesis.

To Clyde Elliott and those students without whom this study could have never been done, my heartfelt thanks.

To those faculty members and students who helped make my two years in graduate school a growing and learning experience, especially Dr. Michael Bertoch.

To Chuck, Fred, and Carol whose friendship helped me through the hard days and whose constructive criticism contributed to this final form of my thesis.

Finally, to all those souls who will struggle through that individual hell called Graduate School, may you not suffer as I have.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES (continued)

LIST OF FIGURES

ABSTRACT

Expressed Group Member Satisfaction and Measured Group Difference Between Trained and Untrained Group Members

by

Dennis Randall Kilstrom, Master of Arts

Utah State University, 1972

Major Professor: Reed S. Morrill, M.S.
Department: Psychology

In college programs utilizing the quarter system there arise problems in the development of encounter groups due to a limited amount of time available. A short training program in evaluating group processes might be one way to facilitate group development. In order to test one such program two hypotheses were generated. Hypotheses I was tested for a significant difference between a Treatment Group, receiving training, and a Control Group, receiving no training, in expressed member satisfaction. Hypothesis II was tested for a significant difference in the therapeutic value of rated interaction between the Treatment and Control Group. Expressed member satisfaction was measured by a Group Rating Scale. Therapeutic value of interaction was measured by the Hill Interaction Matrix.

Two groups of eight subjects were used. Each group had the same leader and met for eight, two and one-half hour sessions, and a three hour training period.

The Treatment Group and the Control Group were exposed to three hours of training with the experimenter. The Treatment Group received three hours of training on the Hill Interaction Matrix. The Control Group received three hours of "placebo" training consisting of an explanation of the purpose of feedback. The dependent variables then were "feedback" for the Control Group and HIM training for the Treatment Group.

The results of the study were favorable to the Treatment Group. Significant differences were revealed on five of the 16 items of the Group Rating Scale. Similarly the Treatment Group received a significantly higher rating in therapeutic value in Quadrant III of the Hill Interaction Matrix after receiving training. However, due to several confounding variables it cannot be definitely stated the results were due to the effects of treatment.

(87 Pages)

CHAPTER I

INTRODUCTION

One of the services made available to students by the Utah State University Counseling and Testing Center is the opportunity to participate in sensitivity or encounter groups. The general purpose of these groups is to foster increased levels of self-actualization, expand awareness of self through experience with self and other group members, and maximizing of human potential. The groups are semi-structured, and emphasis is on interaction, exploration, and expression of "here-and-now" feelings concerning self and other group members. The groups consist of from eight to 12 individuals in addition to a group leader and occasionally a co-leader. The group members participate either on a voluntary basis, or upon recommendation by one of the staff members. The group leader is either a staff member of the Counseling Center, or a qualified graduate student.

There are several problems which arise in connection with the development and effectiveness of these groups. Generally the life of these groups is relatively short (about eight to 10 weeks). This short life is necessary due to changes in class schedules which occur in the quarter class system utilized by the University. The pattern of development of these short groups tends to be one where the first three or four sessions are spent developing the atmosphere of trust

and cohesion necessary for the members to risk disclosing themselves to other group members. During this process the members tend to place the responsibility for the functioning of the group on the leader. If the leader accepts this responsibility, the group members may rely on him to provide the necessary structure for the group to exist instead of assuming this responsibility themselves. In cases where the leader does not accept this responsibility, but instead places it back on the group members, it is not unusual for several members of a group to drop out. In a group of such short life, this tends to further inhibit the development of trust to such a degree that little benefit is obtained from the group experience (Yalom, 1970). The occurrence of any of these problems generally results in the type of interaction which focuses on observable behavior in a superficial manner. There is little or no exploration and expression of pertinent feelings. This appears to limit greatly the potential benefit which could be available to the group members.

These problems may be alleviated by pretraining the group members to recognize the type of interaction which leads to exploration and expression of pertinent feelings.

It may be possible to develop a training program of minimal duration (not more than three hours) based on the Hill Interaction Matrix. This program would entail didactic instruction in the use

of the Hill Interaction Matrix (HIM), and experience in its use. This experience could be provided by having the group members rate samples of interpersonal interaction.

In summary, the problem is that short-term encounter groups, such as those conducted at the Utah State University Counseling Center may not be receiving the maximal therapeutic benefits possible from this type of experience due to their pattern of development.

Review of Literature

This review of the literature will cover three areas:

1. The current literature on interpersonal interaction in groups.
2. The literature regarding training in interpersonal interaction.
3. The development and purpose of the Hill Interaction Matrix.

Current Literature on Interpersonal Interaction in Groups. In recent years there has been a rapid increase in the use of groups. When initially introduced groups were typically used in a setting involving a number of persons with specific problems. These groups were usually conducted by a trained therapist and were viewed as an extension of the individual therapy session. There has been a steady increase in the use of groups for this purpose over the years, especially since the post World War II period (Sundberg and Tyler, 1962). However, the recent increase in the use of groups has

centered around what can be termed personal growth groups. Burke and Bennis (1961) gave a good summary of the overall purpose of many of these groups:

> "An important goal of many groups is the induction of changes in the people participating in the group experience. These changes may be of many types, including a wide variety of perceptual and attitudinal changes in the group members, the acquisition of new cognitive skills and information, and the modification of overt behavioral responses both in the group, and ultimately in other social interaction settings in which the individual participates. Changes such as these are the raison d'etre of both human relations training groups and psychoanalytic groups, which seek to improve the individuals interpersonal responses by helping toward better personal adjustment."

Along with the common goal of inducing changes in the participants, most of the groups have one other aspect in common, reliance on some form of interaction. This interaction is either verbal or nonverbal.

Nonverbal interaction is typically used in groups whose main purpose is to increase sensory awareness. This type of interaction is generally the main focus of Gestalt Groups (Gestalt Therapy, 1951). Most other groups, such as T-Groups and Encounter Groups, rely mainly on verbal interaction. Yalom (1970) states that verbal interaction is the main variable on which group process relies. Stein (1970) commenting on psychotherapy groups states, "The prerequisites of the psychotherapy groups are that the individual member is the object of the treatment, and that the group itself, through group interaction is

the main therapeutic agency." Egan (1970) makes essentially the same statement about the importance of verbal interaction in reference to sensitivity and encounter groups.

Snortum and Myers (1970) studied the intensity of T-Group relationships as a function of interaction. They tested three hypotheses. Member ratings of closeness of:

I. Relationship would increase as a positive function of the number of meetings held.

II. Relationships would increase inversely as a function of the size of the group.

III. Relationships received by individual members would be positively correlated with his rate of participation in group interaction.

To test these hypotheses, Snortum and Myers obtained 10 female and 11 male volunteers. The mean age of the group members was 34.4 years. Verbal interaction was the primary vehicle of group process and the leader was as nondirective as possible. The group met two hours each week for seven weeks. The entire group met for the first, second, fourth, sixth and seventh meetings. For the third and fifth meetings the groups spent one hour in a large group and one hour in two small groups on an alternating basis. After each meeting the members rated each other on three nine point scales; (1) emotional feeling tone, (2) interest value, (3) degree of personal insight.

The results supported all three hypotheses. Ratings of closeness between group members increased systematically over the seven meetings, increased faster in small groups than in the large groups, and increased as a function of the individuals frequent participation in group discussion. The results were statistically significant for all groups.

Literature Regarding Training in Interpersonal Interaction. The recognition of the importance of interpersonal interaction has led, in recent years, to efforts to improve this interaction in the group setting. Traux and Carkhuff (1965) attempted to get hospital patients to engage more quickly in self-exploration by having them listen to a 30 minute tape recording of desired types of group interaction. The group sessions, matched control and experimental groups, were tape recorded and rated on degree of self-exploration by an independent observer. There was some degree of difference between the two groups, in favor of the experimental group, but the difference was not significant. Traux, and Wargo (1969) attempted a similar experiment with outpatients with similar results.

Bernson, Carkhuff, and Myrus (1966) working with college students, demonstrated that group therapy was a more effective method of improving interpersonal skills than were individual training sessions. They used (1) a formal training group which employed previously validated research scales assessing the

dimensions of empathy, positive regard, genuineness, concreteness and self-exploration and a "quasi-therapeutic" experience, (2) a training control group which did everything the same as training groups, with the exception of using the scales and the group therapy experience, and (3) a control group which received no training. The prepost test measures indicated that the formal training group demonstrated the greatest amount of change in interpersonal functioning, followed by the training control group and control group. In almost all cases the difference between the three groups was significant.

Martin and Carkhuff (1968) used a similar design to assess the change in interpersonal functioning of graduate trainees in a summer counseling program. They demonstrated that a combination of didactic and experimental training can "lead to significant improvement in interpersonal functioning" and may lead to constructive personality changes also.

Pierce and Drasgow (1969) worked with 35 male psychiatric inpatients divided into five groups of seven members each. The training group consisted of seven randomly selected patients who were not previously assigned to a group because it was believed they could not function well enough to benefit from a group. The four control groups received drugs, individual therapy, or group

therapy. "The training group demonstrated significant improvement and was found to be functioning significantly more facilitatively on an interpersonal level than the groups receiving drugs, individual, or group therapy."

Carkhuff and Banks (1970), and Carkhuff (1970) applied a similar design to a human relations training group and parent-child relations with similar results.

While these efforts have shown positive and often significant results, such training programs in interpersonal interaction are not feasible for short-term encounter groups. The time involved in such training varies from 20 to 50 hours. A training period of 20 hours length is almost equal to the life span of the group itself. However, it might be possible in a short period of time (two or three hours) to train group members to recognize the therapeutic value of the interaction. Such training could be based on didactic instruction and experience.

The Development and Purpose of the Hill Interaction Matrix.

The Hill Interaction Matrix was developed by William Fawcett Hill (1965) and his associates to give the group therapist an objective tool with which to evaluate the effectiveness or therapeutic value of group interaction in all kinds of groups. The HIM consists of two interacting scales. These scales form a two dimensional matrix--one scale

deals with style of content and is divided into four categories; the other scale deals with the level of therapeutic work and is divided into five categories. The interaction of these scales forms a matrix consisting of 20 cells which are intended to typify recognizable and familiar patterns of behavior.

The four categories in the Content Scale are labeled Topic, Group, Personal, and Relationship. The Topic category pertains to interaction which does not specifically relate to the group as a whole or members of the group as individuals. The Group category pertains to interaction concerning the group in general, but not specifically to individual members. The Personal category pertains to interaction concerning a particular member. The Relationship category pertains to interaction concerning the reactions of members to each other. The Relationship category is characterized by a "here-and-now" emphasis while the Personal category tends to have a "historical" emphasis. The Topic and the Group categories are seen as Topic Centered in that the general content of interaction does not center around individuals. The Personal and Relationship categories are seen as Member Centered in that the general content of interaction centers around individuals and their behaviors.

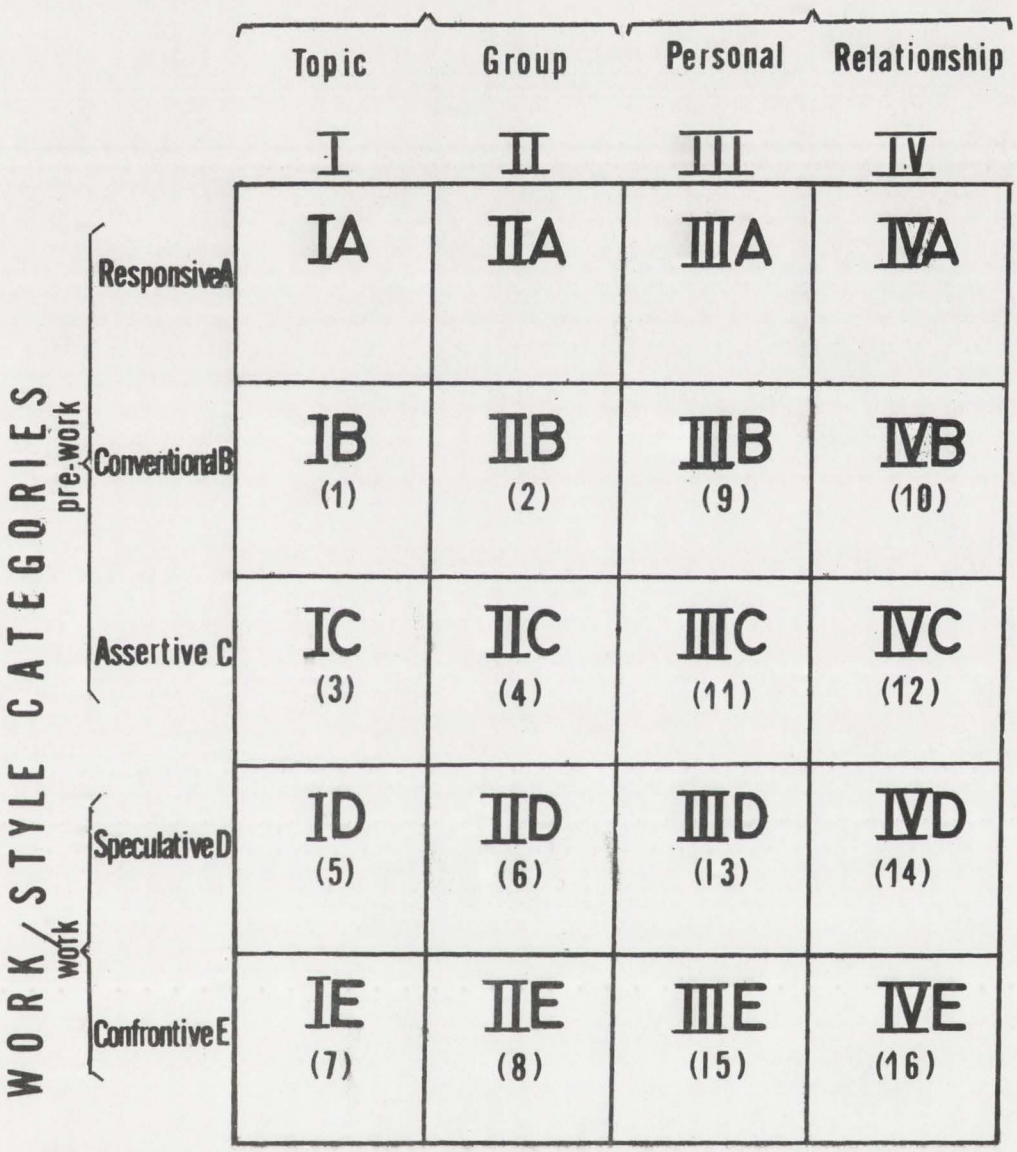
The five categories in the Work Scale categories are labeled Responsive, Conventional, Assertive, Speculative, and Confrontive. The first three categories are labeled as being prework. The final

two categories are labeled Work Centered. Interaction falling in the Work category is typified by someone taking the role of patient and actively seeking self-understanding. In addition, this type of interaction is seen, by Hill, as involving a higher degree of "interpersonal threat." While the interaction falling in the prework categories may have a "topic person," there is a lower degree of "interpersonal threat" involved.

The Responsive category pertains to interaction which has to be maintained by "the constant efforts of the therapist in sponsoring and probing patients" (Hill, 1965). This category is usually restricted to use with regressed or retarded groups of patients. In contrast to this, the following categories pertain to interaction initiated and sustained for the most part by the group members. The Conventional category refers to conversational type interaction such as is observed at parties and on the street. The Assertive category refers to situations in which members interact in an emotional manner, but make little effort toward changing their behavior. The Speculative category refers to interaction in which the members speak about the problems in an intellectual and speculative manner. The Confrontive category refers to interaction in which members confront each other with their behavior and its effects in an emotional manner.

The matrix is presented in Figure 1, with the arabic numerals in parentheses representing the presumed order of therapeutic effectiveness.

FIGURE 1
CONTENT/STYLE CATEGORIES



There are several reasons for attempting to use the HIM as the basis for a training program in interpersonal interaction: its categories have been empirically derived through the study of large numbers of groups; it has been applied to many different kinds of groups (Hill, 1965); it is also relatively easy to understand and use. In addition, it provides a cognitive map of the current functioning of the group which can be compared to desired functioning. These factors may make the HIM especially suitable as a training instrument in this type of situation.

Objective

The objective of this study is to determine if training in the Hill Interaction Matrix will result in a more effective short life encounter group, as measured by the HIM. The effectiveness will be determined by member satisfaction, as measured by a group rating scale, and the therapeutic value of group interaction, as measured by the HIM.

Hypotheses

Two encounter groups will be formed and conducted in as similar a manner as possible to those conducted by the Counseling and Testing Center. One group will be provided with a minimal period of training in the HIM (three hours). The purpose of the training will be to determine if this results in a more effective encounter group, as

measured by a group rating scale. It is expected that the HIM training will result in the members of the Treatment Group expressing a significantly higher level of satisfaction in the group process than does the Control Group. The experimental hypothesis related to this expectation is stated in the following null form.

In a similar manner it is expected that training in the HIM will result in the Treatment Groups interaction being rated significantly higher in "therapeutic value," as measured by the HIM than that of the Control Group. The hypothesis related to this expectation is also stated in the null form.

Hypothesis I. There will be no significant difference between the Treatment and Control Group in expressed member satisfaction.

Hypothesis II. There will be no significant difference in the therapeutic value of interaction between the Treatment and Control Group.

CHAPTER II

METHODS AND PROCEDURES

Two groups were formed for this study. The members of these groups were obtained from the student body of Utah State University. The groups were conducted over a nine week period in as similar a manner as possible except for the treatment variables. Each group was exposed to four, two and one-half hour sessions, followed by a three hour training session, and four more two and one-half hour sessions. The three hour training session of the Treatment Group consisted of an explanation of and practice in use of the HIM. The three hour training session of the Control Group consisted of a review of past group sessions.

For the first four weeks and last four weeks the Treatment and Control Groups were conducted under different conditions (no feedback, feedback, and HIM training). It was expected that exposing each group to two different treatment conditions during the first and last four weeks of the group would help differentiate between the effect of having no feedback, feedback and HIM training on group interaction.

Sample

One Control Group and one Treatment Group, each consisting initially of eight students, served as subjects. The members of the groups were obtained by seeking volunteers from University Psychology

courses and advertising in the student newspaper (see Appendix A). The prospective volunteers were given the following information: Two encounter groups are being formed by the Psychology Department with the purpose of studying the process of group interaction. One of the groups will meet every Tuesday evening for nine weeks, from 6:00 p.m. until approximately 8:30 p.m. The second group will meet for the same length of time every Thursday evening. Anyone who is interested in participating in one of these groups may sign up for the group meeting on the day which is most convenient for them.

Design

Eight volunteers were obtained for each group. The groups were designated as Control or Treatment Groups in a random manner. No attempt was made to control for differences between groups or between group members.

Both groups were led by the same person who was naive as to the purpose of the study. He was also unaware which was the Treatment and which was the Control Group. This leader was familiar with the HIM. His only instruction was to attempt to maintain each group on as high a therapeutic level as possible, based on the HIM categories. All group sessions were recorded and typewritten transcripts were made from these recordings.

Both the Treatment and the Control Groups received two different treatment conditions. Each treatment condition was four weeks in length.

Over the first four weeks of the group the Treatment Group members received feedback on their performance in their group sessions. This feedback was in the form of typewritten transcripts of their group sessions. This treatment condition was labeled TC_1 (weeks 1 . . . 4, TG). Before the fifth session the Treatment Group received a three hour training session on the HIM. They were then asked to use the HIM to rate the transcripts of their subsequent group session. This treatment condition was labeled TC_2 (weeks 5 . . . 8, TG).

Over the first four weeks of the Control Group the group members received no information on their performance in the group. This treatment condition was labeled TC_{1a} (weeks 1 . . . 4, CG).

Before the fifth group session the members of the Control Group were informed that they would receive transcripts of their group sessions and the function that these transcripts could serve. This treatment condition was labeled TC_{2a} (weeks 5 . . . 8, CG).

Thus, the Treatment Group was conducted under two different treatment conditions. Treatment condition 1, TC_1 (weeks 1 . . . 4, TG), consisting of feedback, and treatment condition 2, TC_2 (weeks 5 . . . 8, TG) consisting of HIM training.

In a similar manner the Control Group was conducted under two different treatment conditions. Treatment condition 1_a, TC_{1a} (weeks 1 . . . 4, CG), consisting of no feedback, and treatment condition 2_a, TC_{2a} (weeks 5 . . . 8, CG), consisting of feedback.

Both groups were told that following the instructions given by the experimenter was not mandatory, but if instructions were followed it might make their experience in the group more effective.

Instrumentation

The Hill Interaction Matrix (HIM) was used to measure the therapeutic level of interaction taking place within the two groups. Using the HIM, both as a training technique and a measurement instrument, is felt to be justified for several reasons: (1) if the HIM is designed to be an objective tool with which the therapist can evaluate the effectiveness of group interaction, then it should be able to perform the same function for the group members; (2) the HIM, used as a measuring instrument, should be sensitive to any change in interaction which occurs as a result of exposure to its use; and (3) the review of the literature has shown that it is one of the few objective and reliable instruments available for analyzing group interaction in most types of groups.

The first, second, fourth, sixth, and eighth sessions of both groups were rated on the HIM by a reliable independent observer. The observer was naive as to the purpose of the experiment. The group transcripts were presented to him in a random order.

A T-Group Rating Scale was used to measure expressed member satisfaction in the group process. The rating scale used was a slightly modified and expanded version of that developed by Albert Wright for the Peace Corps. The scale is designed to measure nine areas of interpersonal interaction: "Satisfaction in the group," "Trust in the group," "Acceptance of the group," Effectiveness of the group," "Sensitiveness of the group," "Belonging to the group," "Reliance on the group leader," "Participation of group members," and "Intention to change interaction."

Each scale was given a value of from one to nine, with one signifying complete lack of the specified area of interaction and nine signifying complete presence of that trait. The members of both groups were requested to complete a rating scale after each group session, as was the group leader. A copy of the Group Rating Scale is included in the Appendix (see Appendix B).

CHAPTER III

STATISTICAL ANALYSIS AND RESULTS

Group Rating Scale and Results

A two-way analysis of variance was performed on the data obtained from the Group Rating Scales of both Treatment and Control Groups. The purpose of this analysis was to test whether there were any significant differences within these data (member satisfaction and HIM ratings), and if so attempt to determine if these differences existed due to the effect of treatment conditions (TC_1, TC_{1a}, TC_2, TC_{2a}), the number of T-Group sessions, or some interaction between the two.

A significant F ratio from a cumulative F distribution was selected for these data.

The F ratio is the ratio between the mean square treatment (MS_A, MS_B, or MS_{AxB}) and the mean square error (MS_E or MS_W). The F ratio selected for both treatment conditions (Factor A) and number of sessions (Factor B) was F2. 74. The F ratio selected for the interaction of these two factors was F2. 02. This essentially means that unless these F ratio's are greater than F2. 74, or F2. 02 for the interaction effect, it will be assumed that there was no difference. If the F ratio's are greater than F2. 74, or F2. 02,

this would indicate that there was a significant difference at the .05 level. This means that a difference this large would occur by chance only five times out of 100.

In the case where **F** ratio's indicated a significant difference, an S-comparison was performed to determine between which of the treatments or across which of the sessions the significant differences were to be found. The S-comparison is a statistical technique developed to test any and all possible comparisons of a set of K treatment means. This method of comparison can be used when a significant value of $F=MS_T/MS_W$ is found. If the F is significant, then at least one of the possible comparisons on the treatment means will be significant.

The statistical data for the two-way analysis of variance of the Group Rating Scale are presented in Table 1.

Table 1

Two Way Analysis of Variance Treatment
by Sessions for Group Rating Scale

	Source	df	Mean Square	F Ratio
Satisfaction (Self)	Factor A	3	.4915	.205
	Factor B	3	5.5668	2.320
	Interaction	9	2.5873	1.078
	Error	76	2.4000	
Satisfaction (Felt group)	Factor A	3	2.584	1.416
	Factor B	3	10.321	5.655**
	Interaction	9	1.798	.957
	Error	76	1.825	
Trust (Of group)	Factor A	3	13.534	6.402**
	Factor B	3	3.293	1.558
	Interaction	9	2.086	
	Error	76	2.114	
Trust (Felt group)	Factor A	3	8.762	3.583*
	Factor B	3	14.504	5.932**
	AxB	9	2.845	1.163
	Error	76	2.445	
Effectiveness (Felt group)	Factor A	3	1.374	< 1
	Factor B	3	6.122	2.032
	AxB	9	3.642	1.209
	Error	76	3.012	

Table 1 (continued)

Two Way Analysis of Variance Treatment
by Sessions for Group Rating Scale

	Source	df	Mean Square	F Ratio
Effectiveness (Self)	Factor A	3	5.156	2.101
	Factor B	3	5.982	2.437
	AxB	9	0.806	0.328
	Error	76	2.454	
Acceptance (Felt group)	Factor A	3	26.590	11.214**
	Factor B	3	10.634	4.489**
	AxB	9	1.339	0.564
	Error	76	2.371	
Acceptance (Of group)	Factor A	3	12.107	6.382**
	Factor B	3	3.641	1.909
	AxB	9	.635	0.334
	Error	76	1.897	
Sensitiveness (Felt group)	Factor A	3	3.538	1.572
	Factor B	3	8.569	3.808*
	AxB	9	1.724	0.766
	Error	76	2.250	
Sensitiveness (Self)	Factor A	3	4.161	2.212
	Factor B	3	2.588	1.375
	AxB	9	0.653	0.347
	Error	76	1.881	

Table 1 (continued)

Two Way Analysis of Variance Treatment
by Sessions for Group Rating Scale

	Source	df	Mean Square	F Ratio
	Factor A	3	8.901	2.450
Belonging	Factor B	3	4.499	1.238
(To group)	AxB	9	1.413	0.388
	Error	76	3.633	
	Factor A	3	15.176	3.431*
Insight	Factor B	3	6.813	1.541
(Self)	AxB	9	4.331	0.879
	Error	76	4.421	
	Factor A	3	2.742	0.975
Reliance	Factor B	3	3.577	1.272
(On leader)	AxB	9	2.828	1.005
	Error	76	2.812	
	Factor A	3	3.756	2.117
Participation	Factor B	3	9.316	5.251**
(Felt group)	AxB	9	1.507	0.849
	Error	76	1.774	
	Factor A	3	2.954	1.347
Participation	Factor B	3	2.935	1.338
(Self)	AxB	9	1.413	0.644
	Error	76	2.193	
	Factor A	3	7.762	1.805
Change in	Factor B	3	5.310	1.235
Interaction	AxB	9	1.995	0.463
(Self)	Error	76	4.300	

Factor A = Treatment Condition
Factor B = Number of Sessions

*F = .05
**F = .01

Comparing Factor A (treatment conditions) for items 3, 4, 7, 8, and 12, the F ratio was greater than 2. 74. This means that the difference between the means, on these items, across the four treatment conditions, would be expected to occur by chance alone less than five times out of 100.

S-comparisons were run for these five items. The comparisons made were: TC_1 (weeks 1 . . . 4, TG) to TC_{1a} (weeks 1 . . . 4, CG); TC_2 (weeks 5 . . . 8, TG) to TC_{2a} (weeks 5 . . . 8, CG); TC_1 (weeks 1 . . . 4, TG) to TC_2 (weeks 5 . . . 8, TG); TC_{1a} (weeks 1 . . . 4, CG) to TC_{2a} (weeks 5 . . . 8, CG). These data are presented in Tables 2, 3, 4, 5.

Table 2

S-comparison of item means for group rating scale items 3, 4, 7, 8, 12, between TC_1 (weeks 1 . . . 4, TG) and TC_{1a} (weeks 1 . . . 4, CG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
3	$\bar{X}_1 - \bar{X}_3$ 5.8-4.8	.164	.404	$^{1}/.404$	2.47
4	$\bar{X}_1 - \bar{X}_3$ 4.7-5.2	.213	.461	$^{-.5}/.461$	1.08
7	$\bar{X}_1 - \bar{X}_3$ 4.5-5.1	.206	.454	$^{-.6}/.454$	-1.32
8	$\bar{X}_1 - \bar{X}_3$ 6.3-6.2	.165	.401	$^{.1}/.442$	< 1.00
12	$\bar{X}_1 - \bar{X}_3$ 7.2-6.4	.385	.620	$^{-.6}/.620$	< 1.00

*p= < .05
**p= < .01

Table 3

S-comparison of item means for group rating scale items 3, 4, 7, 8, 12, between TC_2 (weeks 5 . . . 8, TG) and TC_{2a} (weeks 5 . . . 8, CG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
3	$\bar{X}_2 - \bar{X}_4$ 7.2-6.4	.209	.457	$.8/.457$	< 2.00
4	$\bar{X}_2 - \bar{X}_4$ 5.7-6.0	.242	.492	$-.3/.492$	< 1.00
7	$\bar{X}_2 - \bar{X}_4$ 6.2-7.0	.235	.484	$-.8/.484$	< 2.00
9	$\bar{X}_2 - \bar{X}_4$ 7.6-7.5	.188	.433	$.1/.433$	< 1.00
14	$\bar{X}_2 - \bar{X}_4$ 6.0-6.0	--	--	--	--

*p= < .05
**p= < .01

Table 4

S-comparison of item means for group rating scale items 3, 4, 7, 8, 12, between TC_1 (weeks 1 . . . 4, TG) and TC_2 (weeks 5 . . . 8, TG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
3	$\bar{X}_1 - \bar{X}_2$ 5.8-7.2	.171	.413	$-1.4/.413$	-3.43*
4	$\bar{X}_1 - \bar{X}_2$ 4.7-5.7	.198	.449	$-1.0/.449$	-2.25
7	$\bar{X}_1 - \bar{X}_2$ 4.5-6.2	.192	.438	$-1.7/.438$	-3.38*
8	$\bar{X}_1 - \bar{X}_2$ 6.3-7.6	.153	.391	$-1.3/.391$	-3.32*
12	$\bar{X}_1 - \bar{X}_2$ 4.2-6.0	.358	.598	$-1.8/.598$	-3.01*

*p=< .05
**p=< .01

Table 5

S-comparison of item means for group rating scale items 3, 4, 7, 8, 12, between TC_{1a} (weeks 1 . . . 4, CG) and TC_{2a} (weeks 5 . . . 8, CG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
3	$\bar{X}_3 - \bar{X}_4$ 5.5-6.4	.202	.449	$.9/.449$	< 2.00
4	$\bar{X}_3 - \bar{X}_4$ 5.2-6.0	.235	.485	$-.8/.485$	< 2.00
7	$\bar{X}_3 - \bar{X}_4$ 5.1-7.0	.228	.477	$-1.9/.477$	3.98*
8	$\bar{X}_3 - \bar{X}_4$ 6.2-7.5	.182	.427	$-1.3/.427$	3.40*
12	$\bar{X}_3 - \bar{X}_4$ 4.8-6.0	.424	.651	$1.2/.651$	< 2.00

*p= < .05
**p= < .01

In the comparisons of TC_1 (weeks 1 . . . 4, TG) to TC_{1a} (weeks 1 . . . 4, CG) and TC_2 (weeks 5 . . . 8, TG) to TC_{2a} (weeks 5 . . . 8, CG) no significant differences were found between means for these five items (3, 4, 7, 8, 12).

In the comparison of TC_1 (weeks 1 . . . 4, TG) to TC_2 (weeks 5 . . . 8, TG) significant differences were found between the means of items 3, 7, 8, and 12. In all four comparisons the significant differences were in the direction of TC_2 (weeks 5 . . . 8, TG). Item 3 is an indicator of the rater's reported trust in the other group members. Items 7 and 8 are indicators of the rater's reported feeling of acceptance by (7) and acceptance of (8) the other group members. Item 12 is an indicator of the amount of insight the rater reports he has gained as a result of his group experience.

Thus, these S-comparisons indicate that, during TC_2 (weeks 5 . . . 8, TG) the members of the Treatment Group (TC_1 and TC_2) report a higher level of trust and acceptance within the group than they do during TC_1 (weeks 1 . . . 4, TG). They also report gaining a higher degree of insight.

In the comparison of TC_{1a} (weeks 1 . . . 4, CG) to TC_{2a} (weeks 5 . . . 8, CG) significant differences were found on items 7 and 8. In both instances these differences were in the direction of TC_2 (weeks 5 . . . 8, CG). As indicated previously, these items are indicators of the rater's reported acceptance by and acceptance of

other group members. These S-comparisons, then, indicate that the members of the Control Group (TC_{1a} and TC_{2a}) report a higher level of acceptance during TC_{2a} (weeks 5 . . . 8, CG) than they do during TC_{1a} (weeks 1 . . . 4, CG). The implications of these significant data will be explored in the Discussion section.

Looking at Factor B, the number of sessions within each of the four treatment conditions, F ratio's greater than F2. 78 were obtained on items 2, 4, 7, 9, and 14. This means the differences between the means for these items, across sessions, would be expected to occur by chance alone less than five times out of 100.

The following S-comparisons were made within the Treatment Group: significant item means across sessions 1 . . . 4 (TC_1); significant item means across sessions 5 . . . 8 (TC_2); significant item means across sessions 1 . . . 8 (TC_1 and TC_2). The means of the significant item across sessions 1 . . . 4, 5 . . . 8, 1 . . . 8, are presented in Table 6. The data for the S-comparisons are presented in Tables 7, 8, and 9.

TABLE 6.

Means Of Significant Items 2, 4, 7, 9, 14.
Across Sessions 1...8 For The Treatment Group.

ITEMS

SESSIONS	ITEM 2.	ITEM 4.	ITEM 7.	ITEM 9.	ITEM 14.
1	4.7	4.4	3.9	4.4	5.3
T.C.$_1$ 2	6.0	5.4	4.9	4.7	6.4
3	5.5	4.5	4.8	5.5	5.8
4	6.6	4.2	4.6	6.0	6.4
GRAND MEAN 1...4	5.7	4.6	4.5	5.0	6.0
5	5.2	4.2	4.8	4.5	5.8
T.C.$_2$. 6	7.0	5.8	5.7	5.7	7.0
7	7.2	7.0	7.2	6.8	7.2
8	5.5	6.0	7.3	7.0	5.8
GRAND MEAN 5...8	6.2	5.7	6.1	6.0	6.4
GRAND MEAN 1...8	5.9	5.2	5.4	5.6	6.2

Table 7

S-comparison of item means for group rating scale items 2, 4, 7, 9, 14, across TC_1 (weeks 1 . . . 4, TG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
2	$\overline{X}_1 - \overline{X}_4$ 4.7-6.6	.624	.790	$-1.9/7.90$	2.40
4	$\overline{X}_1 - \overline{X}_2$ 4.4-5.4	.836	.914	$-1.1/.914$	< 2.00
7	$\overline{X}_1 - \overline{X}_2$ 3.9-4.9	.810	.900	$-1.0/.900$	< 2.00
9	$\overline{X}_1 - \overline{X}_4$ 4.4-6.0	.767	.875	$-1.6/.875$	< 2.00
14	$\overline{X}_1 - \overline{X}_4$ 5.3-6.4	.607	.779	$-1.1/.779$	< 2.00

*p= < .05
**p= < .01

Table 8

S-comparison of item means for group rating scale items 2, 4, 7, 9, 14, across TC_2 (weeks 5 . . . 8, TG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
2	$\bar{X}_5 - \bar{X}_7$ 5.2-7.2	.668	.817	2.00/.817	2.44
4	$\bar{X}_5 - \bar{X}_7$ 4.2-7.0	.839	.914	-2.8/.914	3.06*
7	$\bar{X}_5 - \bar{X}_8$ 4.8-7.3	.868	.932	-2.3/.932	2.46
9	$\bar{X}_5 - \bar{X}_8$ 4.5-7.0	.823	.907	-2.6/.907	2.86*
14	$\bar{X}_5 - \bar{X}_7$ 5.8-7.2	.649	.805	-1.4/.805	<2.00

*p= < .05
**p= < .01

Table 9

S-comparison of item means for group rating scale items 2, 4, 7, 9, 14, across TC_1 and TC_2 (weeks 1 . . . 8, TG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
2	$\bar{X}_1 - \bar{X}_7$ 4.7-7.2	.629	.790	$-2.5/.790$	3.16*
4	$\bar{X}_1 - \bar{X}_7$ 4.4-7.0	.836	.914	$-2.6/.914$	2.86*
7	$\bar{X}_1 - \bar{X}_8$ 3.9-7.3	.730	.854	$-3.4/.854$	3.98*
9	$\bar{X}_1 - \bar{X}_8$ 4.4-7.0	.683	.826	$2.6/.826$	3.14*
14	$\bar{X}_1 - \bar{X}_7$ 5.3-7.2	.606	.778	$-1.9/.778$	2.44

*p= < .05
**p= < .01

No significant differences were found for the five item means (2, 4, 7, 9, and 14) across sessions 1 . . . 4 (TC_1) of the Treatment Group.

Comparison of item means across sessions 5 . . . 8 (TC_2) of the Treatment Group produced a significant difference between sessions 5 and 8 for item 9. Item 9 is an indicator of how sensitive the rater reports the group members are to his feelings. Thus, under TC_2, the members of the Treatment Group report a significant increase in sensitivity of the other group members to their feelings.

The comparison of item means across sessions 1 . . . 8 for the Treatment Group produced significant differences for items 2, 4, 7, and 9. For item 2 there was a significant difference between session 1 and 7 with the difference in the direction of session 2. There was a decrease in the means of these items between session 7 and 8, but the difference was not significant. There was a significant difference between sessions 1 and 8 for items 4, 7, and 9. The differences for these items was also in the direction of session 8.

Item 2 is the rater's report of how satisfying he feels the group experience was for the other group members. Item 4 is the rater's report of how much he feels the group members trust him. Item 7 is the rater's report of how much acceptance he feels from the other group members. Item 9 is the rater's report of the other group members sensitivity to his feelings.

The S-comparisons for the Treatment Group (TC_1 and TC_2) indicate that the group members report the following: a significantly higher level of satisfaction in their group experience; a significantly higher level of trust within the group; a significantly higher feeling of acceptance within the group; and a significantly higher sensitivity to the feelings of others.

There was a general trend toward higher item means for all five of these items as the number of sessions increased.

The following S-comparisons were made within the Control Group: significant item means across sessions 1 . . . 4 (TC_{1a}, no feedback); significant item means across sessions 5 . . . 8 (TC_{2a}, feedback); significant item means across sessions 1 . . . 8 (TC_{1a} and TC_{2a}).

The means of these items for the eight sessions are presented in Table 10. The data for the S-comparisons are presented in Tables 11, 12, and 13. As in the previous S-comparisons, the two item means with the greatest difference are compared.

TABLE 10

Means Of Significant Items 2, 4, 7, 9, 14.
Across Sessions 1 . . . 8 For The Control Group.

ITEMS

SESSIONS	ITEM 2.	ITEM 4.	ITEM 7.	ITEM 9.	ITEM 14.
T.C.$_{3.}$ 1	4.9	5.4	4.5	5.4	4.6
2	6.1	6.3	5.3	6.3	5.9
3	5.4	5.8	5.6	6.4	6.8
4	4.6	4.4	5.4	5.4	5.2
GRAND MEAN$_{1 . . . 4}$	5.2	5.5	5.2	5.9	5.6
5	5.0	4.4	6.4	5.6	5.8
T.C.$_{4.}$ 6	5.8	6.2	6.4	5.6	6.2
7	6.5	7.7	8.2	7.0	7.7
8	5.5	6.5	7.2	5.7	6.0
GRAND MEAN$_{5 . . . 8}$	5.7	6.2	7.0	6.0	6.4
GRAND MEAN$_{1 . . . 8}$	5.5	5.8	6.1	5.9	6.1

Table 11

S-comparison of item means for group rating scale items 2, 4, 7, 9, 14, across TC_{1a} (weeks 1 . . . 4, CG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
2	$\bar{X}_1 - \bar{X}_2$ 4.9-6.1	.492	.701	$-1.2/.701$	< 2.00
4	$\bar{X}_1 - \bar{X}_2$ 5.4-6.3	.653	.808	$-.9/.808$	< 2.00
7	$\bar{X}_1 - \bar{X}_3$ 4.5-5.6	.770	.877	$-1.1/.877$	< 2.00
9	$\bar{X}_1 - \bar{X}_3$ 5.4-6.4	.731	.854	$-1.0/.854$	< 2.00
14	$\bar{X}_1 - \bar{X}_3$ 4.6-6.8	.576	.759	$-2.2/.759$	2.89*

*p= < .05
**p= < .01

Table 12

S-comparison of item means for group rating scale items 2, 4, 7, 9, 14, across TC_{2a} (weeks 5 . . . 8, CG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
2	$\bar{X}_5 - \bar{X}_7$ 5.0-6.5	.831	.911	$-1.5/.911$	< 2.00
4	$\bar{X}_5 - \bar{X}_7$ 4.4-7.7	1.100	1.05	$-3.3/1.05$	3.14*
7	$\bar{X}_5 - \bar{X}_7$ 6.4-8.2	1.156	1.07	$1.80/1.07$	< 2.00
9	$\bar{X}_5 - \bar{X}_7$ 5.6-7.0	1.010	1.00	$-1.4/1.00$	< 2.00
14	$\bar{X}_5 - \bar{X}_7$ 5.8-7.7	.785	.886	$-1.9/.886$	2.14

*p= < .05
**p= < .01

Table 13

S-comparison of item means for group rating scale items 2, 4, 7, 9, 14, across TC_{1a} and TC_{2a} (weeks 1 . . . 8, CG)

Item	Estimate of contrast	Estimate of variance of contrast	Square root of estimate of variance	Ratio: Estimate of contrast / Variance of contrast	F
2	$\bar{X}_1 - \bar{X}_3$ 4.9-6.5	.831	.911	$-1.6/.911$	< 2.00
4	$\bar{X}_1 - \bar{X}_7$ 5.4-7.7	.917	.957	$-2.3/.957$	2.41
7	$\bar{X}_1 - \bar{X}_7$ 4.5-8.2	.889	.942	$-3.7/.942$	3.92*
9	$\bar{X}_1 - \bar{X}_7$ 5.4-7.0	.844	.919	$-1.6/.919$	< 2.00
14	$\bar{X}_1 - \bar{X}_7$ 4.6-7.7	.665	.815	$-3.1/.815$	3.80*

*p= < .05
**p= < .01

The comparison of item means across sessions 1 . . . 4 (TC_{1a}), shown in Table 11 produced a significant difference between sessions 1 and 3 in item 14. Item 14 is a report of how well the rater feels the group members have participated. This significant difference indicates that the individual rater reports a significant increase in group participation between sessions 1 and 3.

The comparison of item means across sessions 5 . . . 8 (TC_{2a}), shown in Table 12, produced a significant difference between sessions 5 and 7 on item 4. Item 4 is the rater's report of the amount of trust he feels from the group members. The significant difference on this item indicates that the individual rater reports a significant increase in the amount of trust from the other group members between sessions 5 and 7.

The comparison of item means across sessions 1 . . . 8 (TC_{1a} and TC_{2a}), shown in Table 13, indicate significant differences across 1 . . . 7 on items 7 and 14. Item 7 reports the rater's feeling of acceptance by the other group members. Item 14 is a report of group participation. These significant differences report a significant increase in the amount of acceptance felt by the individual group members and a significant increase in the amount of group participation. These increases occurred between the first and seventh sessions.

The two-way analysis of variance of the data from the Group Rating Scale revealed that there were significant differences between the means of items 3, 4, 7, 8, and 12 on Factor A, which was the treatment condition factor. The S-comparison revealed that these significant differences occurred between TC_1 and TC_2 of the Treatment Group and between TC_{1a} and TC_{2a} of the Control Group. There were no significant differences of item means between the Treatment and Control Groups. These results will be discussed in the next chapter.

When the above two-way analysis of variance was computed the data obtained from the Group Rating Scales filled out by the group leader were included. The data obtained from the group leader and the group members was separated. A comparison was made between these data. The comparisons were made using the t-test for the difference between two means. The mean for each item, 1 . . . 16, obtained from the group leader's Group Rating Scale was compared to the mean of each item, 1 . . . 16, obtained from the group members Group Rating Scales. A separate comparison was made for each treatment condition. The means obtained for each item on the scale, for the group leader and the group members, in each treatment condition are presented in Table 14. The respective item means for the group leader and the group members, and for each treatment condition, are presented graphically in Figures 2, 3, 5, and 5.

TABLE 14

Comparison Of The Item Means Of Group Leader, Group Rating, Scale Data, To Group Member, Group Rating Scale Data, For All Treatment Conditions.

	TREATMENT COND 1		TREATMENT COND 2		TREATMENT COND 1_a		TREATMENT COND 2_a	
	GL	GRP	GL	GRP	GL	GRP	GL	GRP
1	7.5	** 5.5	8.0	** 5.6	4.5	* 5.5	6.7	** 5.1
2	7.0	** 5.6	8.0	** 5.2	4.7	5.4	6.7	* 5.7
3	7.5	** 5.8	7.7	7.2	4.7	5.5	5.5	6.4
4	7.0	** 4.7	7.7	** 5.7	4.7	5.2	6.5	6.0
5	5.7	5.3	6.0	5.5	3.2	** 5.2	4.2	** 5.8
6	5.5	4.9	6.2	5.5	5.0	4.8	4.5	** 5.8
7	6.2	** 4.5	7.7	** 6.2	5.5	5.1	7.2	7.0
8	7.2	* 6.3	7.7	7.6	6.0	6.2	7.5	7.5
9	6.0	* 5.1	6.7	5.9	5.2	5.8	6.7	5.9
10	7.7	** 5.8	7.2	6.9	7.0	6.3	7.5	6.5
11	7.2	** 5.1	8.2	** 6.1	5.7	5.5	7.0	6.5
12	5.7	** 4.2	6.0	6.0	5.2	4.8	4.5	** 6.0
13	4.7	5.5	5.0	5.0	6.0	5.6	5.4	5.9
14	5.7	6.0	6.5	6.4	3.7	** 5.5	4.2	** 6.4
15	6.5	5.8	7.7	** 6.2	6.0	5.8	6.7	6.5
16	3.5	** 5.3	4.0	4.7	3.5	** 5.8	3.5	4.7

* $P < .05$

** $P < .01$

FIGURE 2.

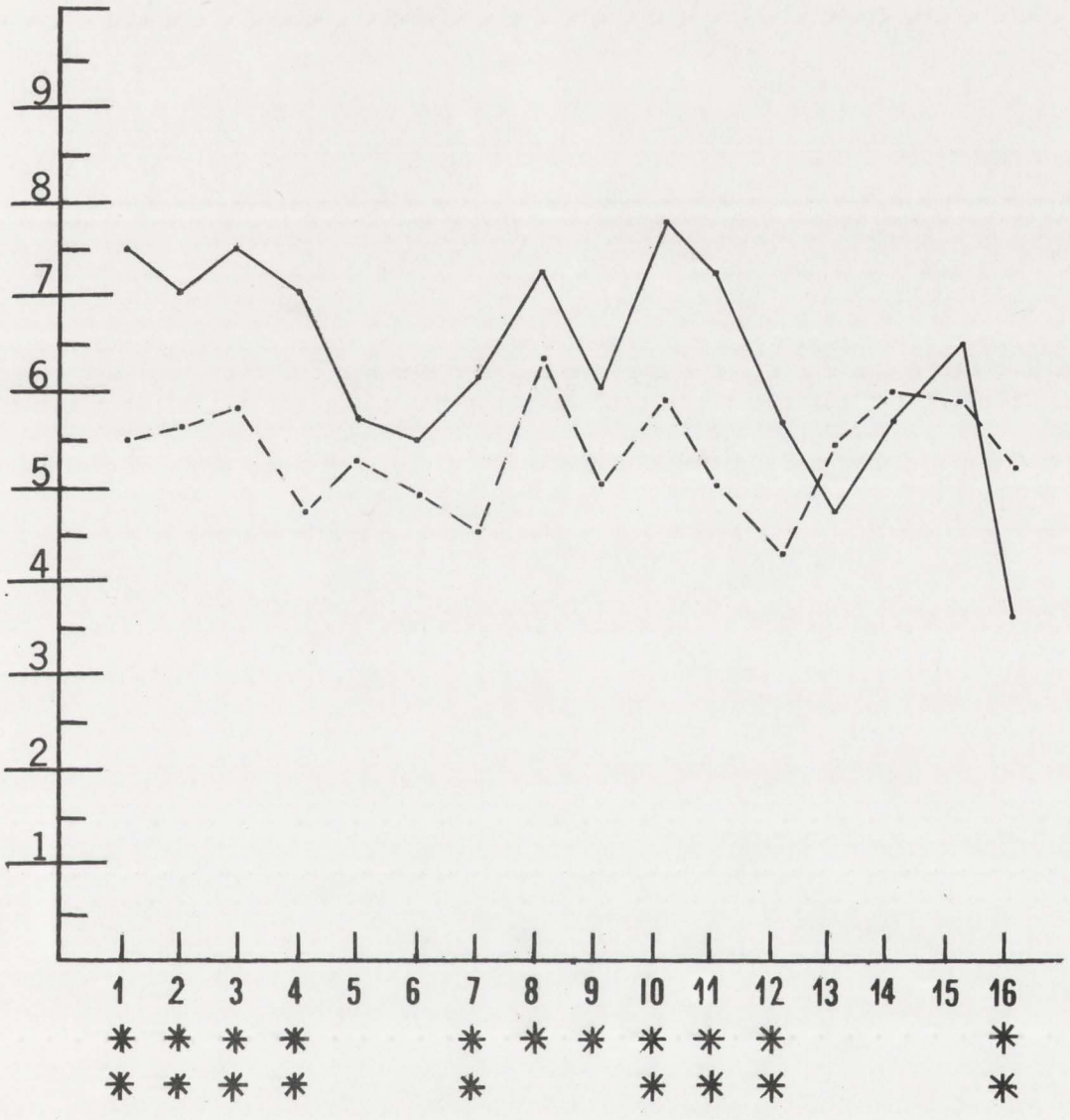


Fig.2. Comparison of Group Leader item means and Group item means for T.C.$_1$ of the treatment group.

* $P < .05$
** $P < .01$

GL $\bar{X}$ _____.
G $\bar{X}$ _ _ _ _ _.

FIGURE 3.

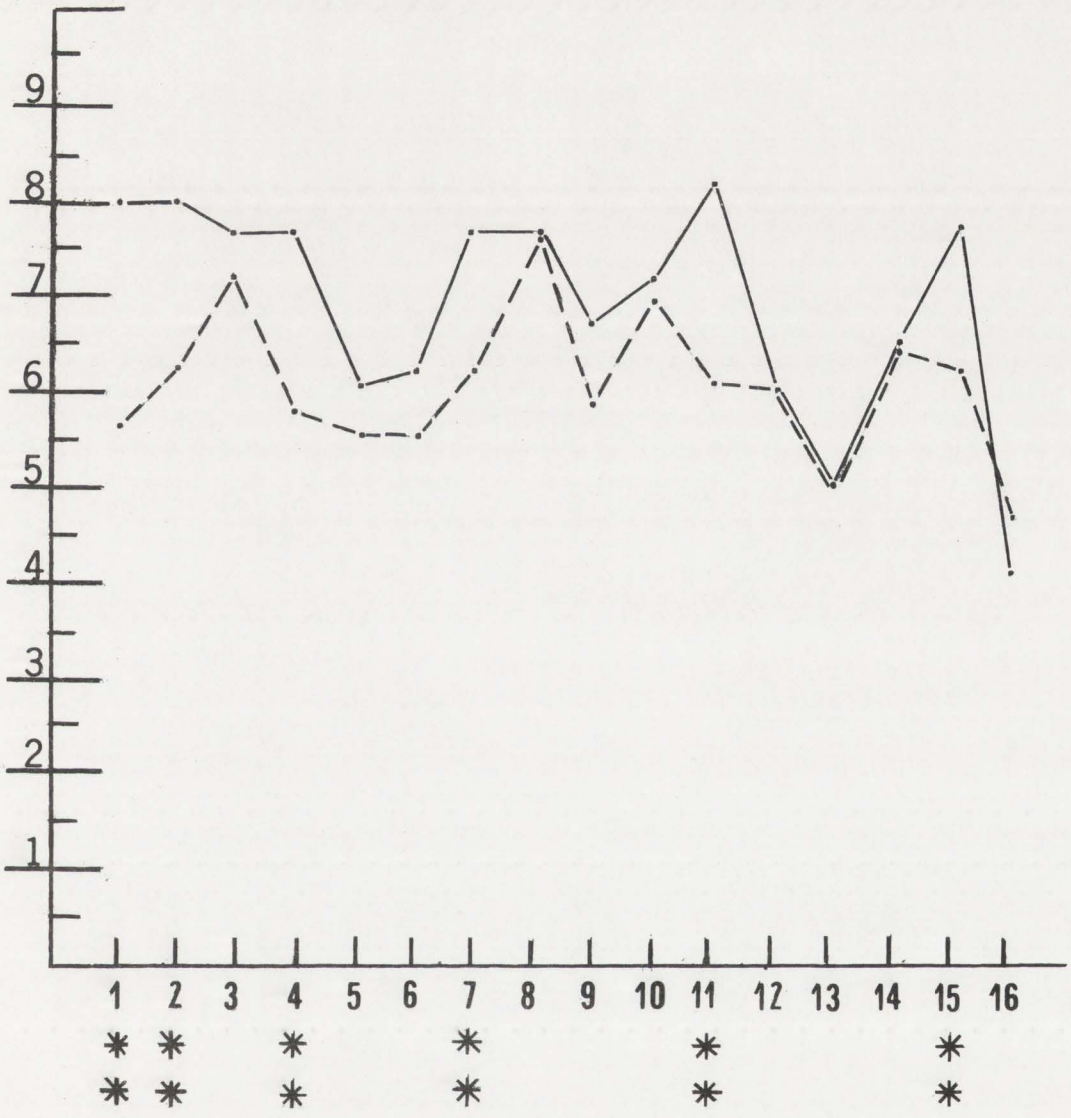


Fig. 3. Comparison of Group Leader item and Group item means for T. C.$_2$ of the treatment group.

* $P \leq .05$ GL $\bar{X}$. _____.

* * $P < .01$ G $\bar{X}$. _ _ _ _ _ _.

FIGURE 4.

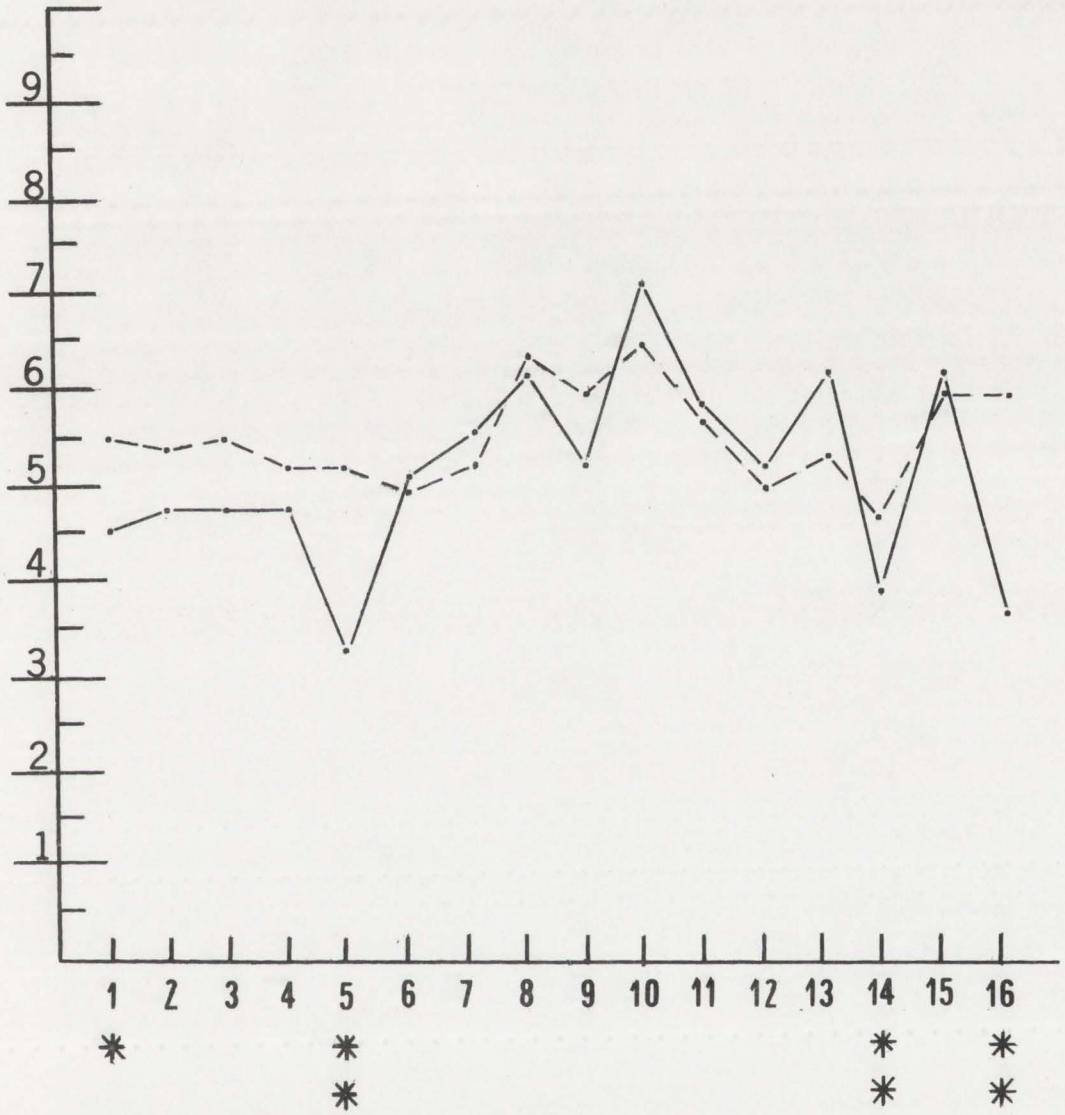


Fig. 4. Comparison of Group Leader item means and Group item means for T.C.$_{1a}$ for the control group.

* $P \leq .05$ GL $\bar{X}$._____.

* * $P < .01$ G $\bar{X}$._ _ _ _ _.

FIGURE 5.

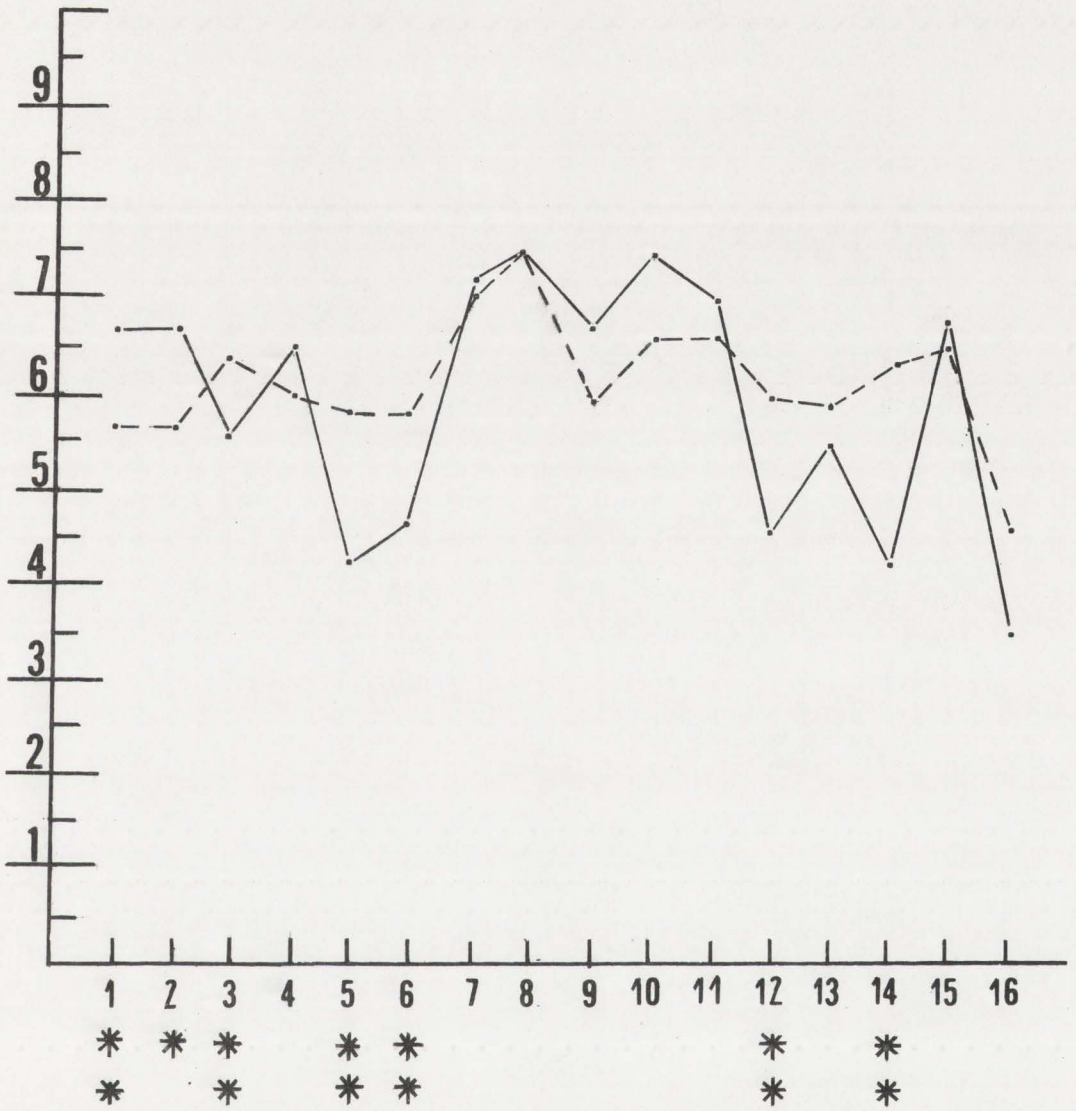


Fig. 5. Comparison of Group Leader item means and Group item means for T. C.$_{2.a}$ for the control group.

* $P < .05$
* * $P < .01$

$GL\bar{x}$._____.
$G\bar{x}$._ _ _ _ _.

Examination of the item means obtained from group leader's ratings and the group member's rating for TC_1 (weeks 1 . . . . 4, TG) reveals significant differences on 11 of the 16 items. The group leader rated the group significantly higher on items 1, 2, 3, 4, 7, 8, 9, 10, 11, and 12 than the group rated themselves. He rated the group significantly lower on item 16. This indicates that during TC_1 (weeks 1 . . . 4, TG) the group leader reports the following as compared to the rest of the group members: (1) the group experience was more satisfying (items 1 and 2); (2) a higher feeling of trust among the group members (items 3 and 4); (3) a higher feeling of acceptance among the group members (items 7 and 8); (4) a higher sensitivity for each others feelings (items 9 and 10); (5) a higher feeling of belonging to the group (item 11); (6) a higher feeling of insight gained. The group leader also reports less of an intention of changing the manner in which he is interacting in the group than do the group members (item 16). The group leader, then, reports a higher level of satisfaction with the group experience than do the group members during TC_1.

Examination of the group leader and group member item means for TC_2 (weeks 5 . . . 8, TG) reveals significant differences on items 1, 2, 4, 7, 11, and 15. As under TC_1 (weeks 1 . . . 4, TG), the group leader's ratings are higher than those of the group members. The group leader reports the group experience as being more

satisfying than the group members (items 1 and 2). He reports a higher feeling of trust from the other group members (item 4). He reports feeling more acceptance from the group members than do the rest of the group members (item 7). He reports a higher feeling of belonging to the group (item 11), than the group members report. He also reports feeling a higher degree of participation as an individual than do the other group members (item 15).

As under TC_1 (weeks 1 . . . 4, TG), the group leader reports a higher level of satisfaction in his group experience than do the group members of the Treatment Groups. The discrepancy between the group leaders ratings and those of the group members has decreased between TC_1 and TC_2. Examination of Figure 1 shows that the group leader rated the group higher on 13 of the 16 items during TC_1; During TC_2 he also rated the group higher on the same 13 items, but the differences between the ratings has decreased overall.

Looking at the differences between group leader item means and group member item means under TC_{1a} (weeks 1 . . . 4, CG), it is observed that the group leader rated the group significantly lower on four items (1, 5, 14, and 16) than the group members rated themselves. He reports the group experience as being less satisfying than do the group members (item 1). He reports the group as being less effective in eliciting "here-and-now" feelings (item 5), reports

the group members as not participating as well (item 14) as the group members report themselves doing. He also reports less of an intention to change the way he is interacting in the group than do the group members (item 16).

Under TC_{2a} (weeks 5 . . . 8, CG) the comparison of item means reveals significant differences between the ratings of the group leader and those of the group members on seven items. The ratings of the group leader are significantly lower on five items and significantly higher on two items than are the ratings of the group members. He rates the group higher on reported satisfaction (items 1 and 2) than the group members rate themselves. He rates the group lower on the amount of trust felt in the group than do the group members (item 3). He rates the group lower on expressing "here-and-now" feelings (items 5 and 6), amount of insight gained from the group experience (item 12), and on amount of group participation (item 14), than do the group members.

Under TC_{2a} (weeks 5 . . . 8, CG) there were a higher number of significant differences in item means between the group leader and the group members. However, on two of these differences the group leader rated higher than the group members under TC_{1a} (weeks 1 . . . 4, CG). Examination of Figures 3 and 4, however, shows that there was closer agreement between group leader ratings and group member ratings under TC_{2a} (weeks 5 . . . 8, CG) than under

TC_{1a} (weeks 1 . . . 4, CG). While TC_{1a} had fewer significant differences, the group leader's ratings were lower than those of the group on 14 of 16 items. Under TC_{2a} the group leader's ratings were lower on only eight of 16 items, and on two of the items the group leader rated significantly higher. Therefore, it appears that under TC_{2a} there is closer agreement between the reported satisfaction, gained from the group experience, expressed by the group leader and the group members. Under TC_{2a} the group leader also reports the experience as being more satisfying overall.

Examination of Figures 2 and 3 reveals that the group leader rates the Treatment Group higher, on 13 of the rating scale items, than the group members rate themselves. Examination of Figures 4 and 5 reveals that the group leader rates the Control Group lower, on at least 10 of the rating scale items, than the members rate themselves. A comparison was made of the data obtained from the group leader's ratings of the Treatment Group (TC_1 and TC_2) and the Control Group (TC_{1a} and TC_{2a}) using a t-test for the difference between two means. The results of this comparison are shown in Figure 6.

FIGURE 6.

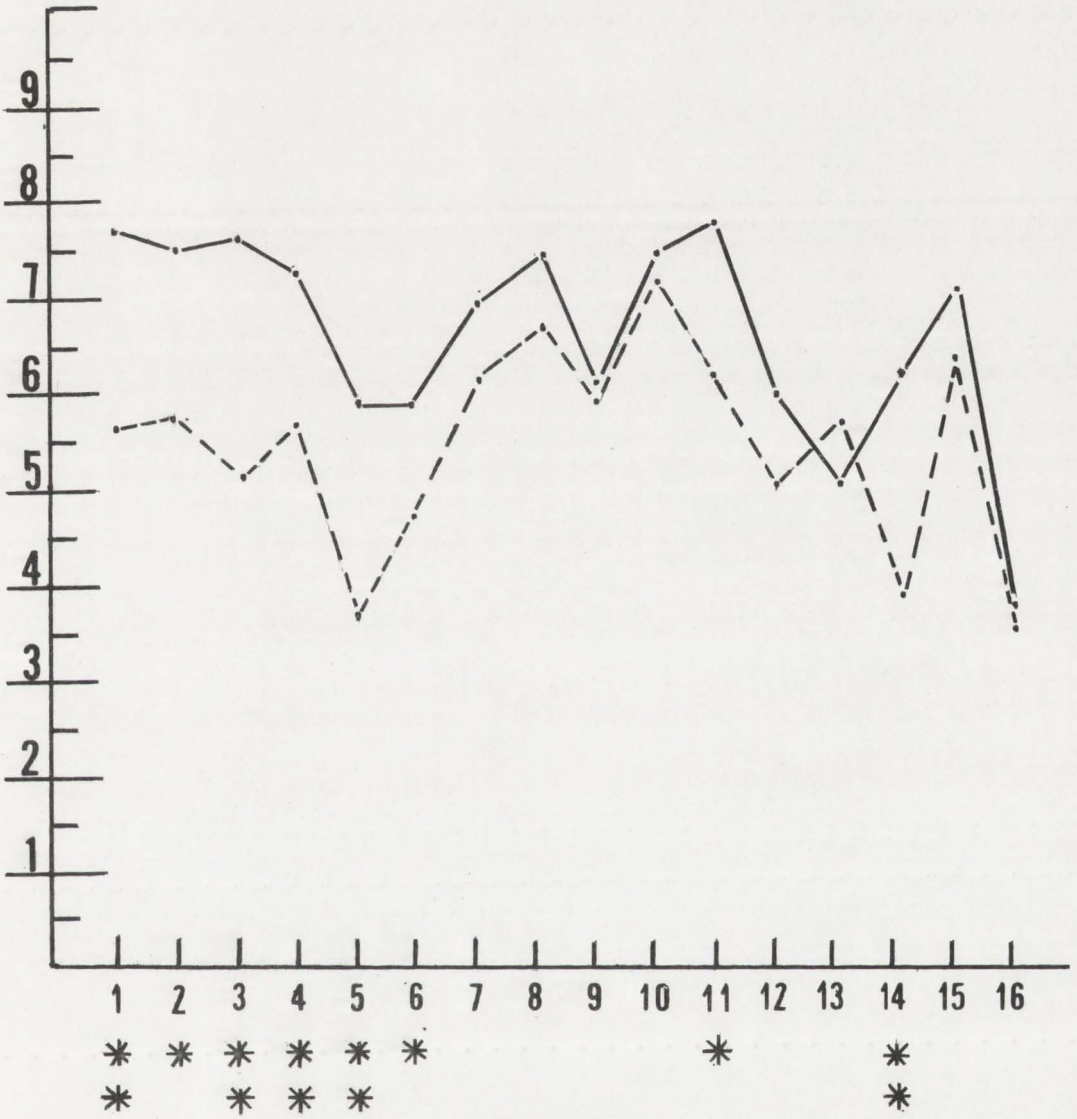


Fig. 6. Comparison of Group Leader item means between Treatment Group ($T.C._{1.} + T.C._{2.}$) and Control Group ($T.C._{1a.} + T.C._{2a.}$).

* $P < .05$
** $P < .01$

GL $\bar{X}$ Treatment Group. _____.
GL $\bar{X}$ Control Group. _ _ _ _ _.

The results show that the group leader rates the Treatment Group higher than he rates the Control Group on 14 of the 16 items. The difference between the two groups was significant on eight of these 14 items. Thus, the group leader reports a higher overall level of satisfaction from his experience with the Treatment Group than he does with the Control Group.

HIM Analysis and Results

A t-test for the difference between means was performed to test the significance of the mean percentage of total interaction taking place within each of the Quadrants of the HIM across treatment conditions.

Quadrant I represents the interaction which occurs in the four cells labeled Prework-Topic Centered, or cells I B, II B, I C, II C. Interaction occurring in this Quadrant is characterized by conventional or assertive types of statements which demonstrate the speaker is concerned with interaction relating to general-interest topics, or with interaction relating specifically to the group.

Quadrant II represents the interaction which occurs in the four cells labeled Work-Nonmember Centered, or cells I D, II D, I E, II E. Interaction occurring in this Quadrant is characterized by speculative and confrontive types of statements which demonstrate the speaker is concerned with social interaction relating to general-interest topics, or with interaction relating to the group.

The main difference between Quadrant I and Quadrant II interaction is the manner in which the topic or group centered topics are exchanged. In Quadrant I they are exchanged in a manner which is socially appropriate for any group (Conventional), or in a manner which is argumentative or hostile (Assertive). In Quadrant II these same type of topic statements are exchanged in a manner which is an intellectual and controlled approach (Speculative), or in a manner which confronts group members with their behavior (Confrontive).

Quadrant III represents the interaction which occurs in the four cells labeled Prework-Member Centered, or cells III B, IV B, III C, IV C. Interaction occurring in this Quadrant is characterized by conventional and assertive types of statements which demonstrate the speaker is concerned with interaction relating to a specific group member of the relationship between two, or more, group members.

Quadrant IV represents the interaction which occurs in the four cells labeled Work, Member Centered, or cells III D, IV D, III E, IV E. Interaction occurring in this Quadrant is characterized by speculative, or confrontive types of statements which demonstrates the speaker is concerned with interaction relating to a specific group member, or the relationship between two, or more, group members.

The percentages used in the t-tests were obtained by combining the number of interactions taking place within each cell to obtain a total for each Quadrant. The number of interactions taking

place in each Quadrant were then divided by the total number of interactions taking place in a particular group session. This procedure was used to determine the percentage of interaction taking place in each of the four Quadrants of the HIM during TC_1, TC_2, TC_{1a} and TC_{2a} of the Treatment Group and Control Group. These data are shown in Table 15.

Table 15

Total mean percentage of interaction occurring within each HIM Quadrant during each Treatment Condition

Quadrants	TC_1	TC_2	TC_{1a}	TC_{2a}
I	12.0	18.5	10.5	20.5
II	9.5	9.0	8.5	15.0
Total	21.5	27.5	19.0	35.5
III	37.0	36.5	31.5	23.0
IV	41.5	36.0	49.5	41.5
Total	78.50	72.5	81.0	64.5
Grand Total	100.0	100.0	100.0	100.0

The t-test was then used to determine if any significant differences occurred between the mean percentage of interaction taking place in each of the four Quadrants of the HIM for TC_1 (weeks 1 . . . 4, TG) and TC_{1a} (weeks 1 . . . 4, CG), likewise for TC_2 (weeks 5 . . . 8, TG) and TC_{2a} (weeks 5 . . . 8, CG). The data from these analyses are shown in Figures 7 and 8.

FIGURE 7.

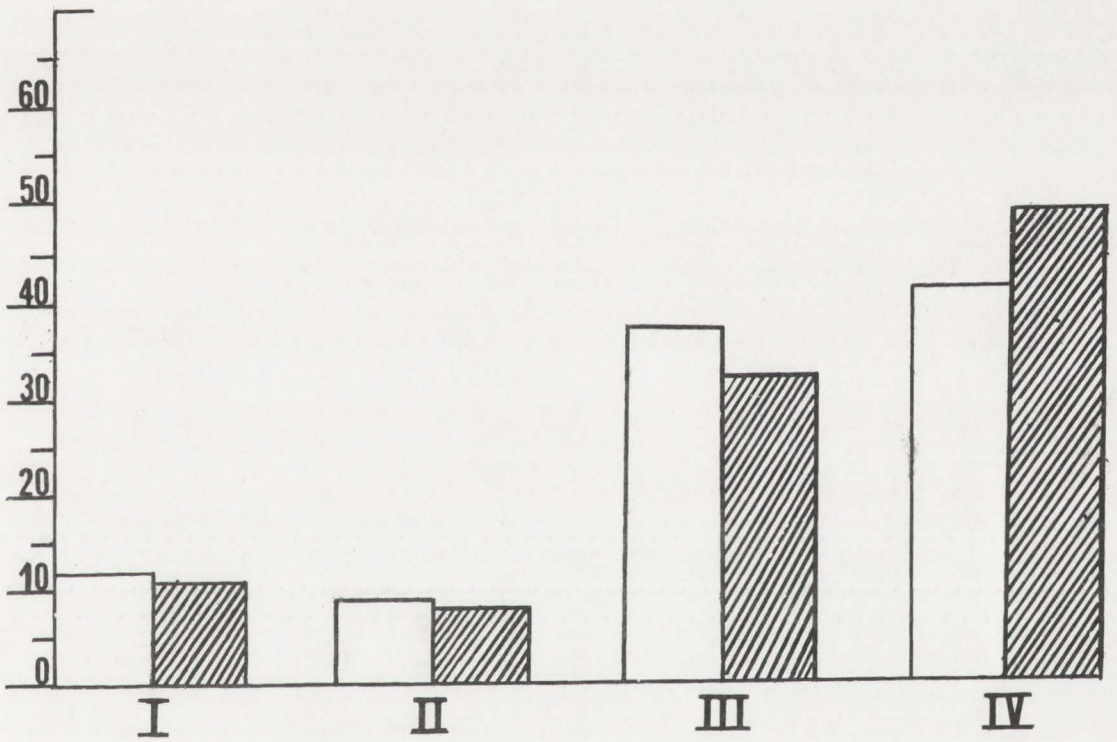


Fig 7. Percentage of interaction occuring within each quadrant of the H I M for T.C. 1. (feedback, treatment group) and T.C. $1._a$ (no feedback, control group.)

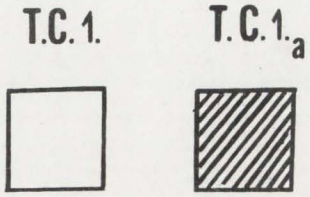


FIGURE 8.

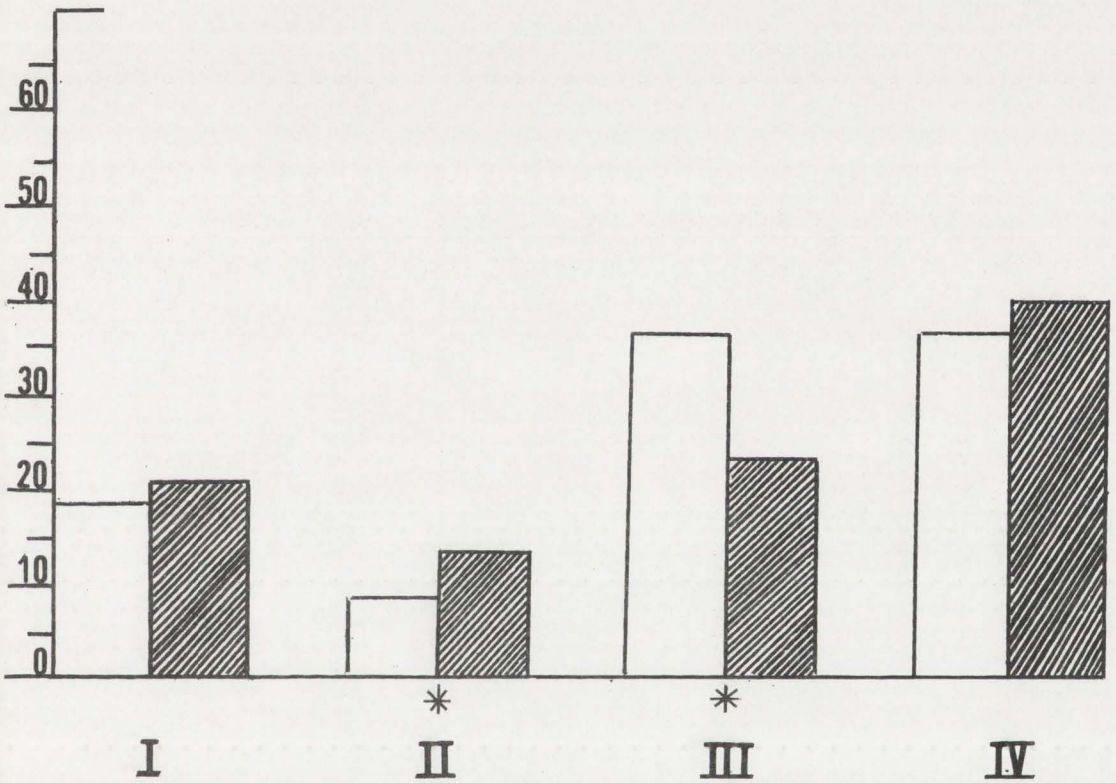


Fig. 8. Percentage of interaction occuring within each quadrant of the HIM for T.C. 2. (training, treatment group) and T.C. $2._a$ (feedback, control group).

T.C.2. T.C. $2._a$

* $P < .05$

** $P < .01$

Examination of Figure 7 reveals no significant differences between the mean percentages of interaction occurring in each of the four HIM categories for TC_1 and TC_{1a}. This indicates that the Treatment Group, under TC_1 (feedback) and the Control Group, under TC_{1a} (no feedback) interacted in a similar manner based on the HIM categories.

Examination of Figure 8 reveals that during TC_2 (HIM training) of the Treatment Group, there occurred a significantly lower mean percentage of interaction in Quadrant II (Work-Nonmenber Centered) than in the Control Group during TC_{2a} (feedback). During TC_2 of the Treatment Group there also occurred a significantly higher mean percentage of interaction in Quadrant III (Prework-Member Centered) than in the Control Group during TC_{2a}.

This indicates that the Treatment Group, during TC_2 (HIM training) interacted in a manner which was significantly different than the Control Group, during TC_{2a} (feedback), as measured by Quadrants II and III of the HIM. In this instance the Treatment Group interacted in a "more therapeutic manner" as measured by the HIM.

In a similar manner, t-tests were performed to determine if any significant differences in the mean percentage of interaction occurred between respective HIM Quadrants for TC_1 (weeks 1 . . . 4) and TC_2 (weeks 5 . . . 8) of the Treatment Group and TC_{1a} (weeks 1 . . . 4) and TC_{2a} (weeks 5 . . . 8) of the Control Group. These data are shown in Figures 9 and 10.

FIGURE 9.

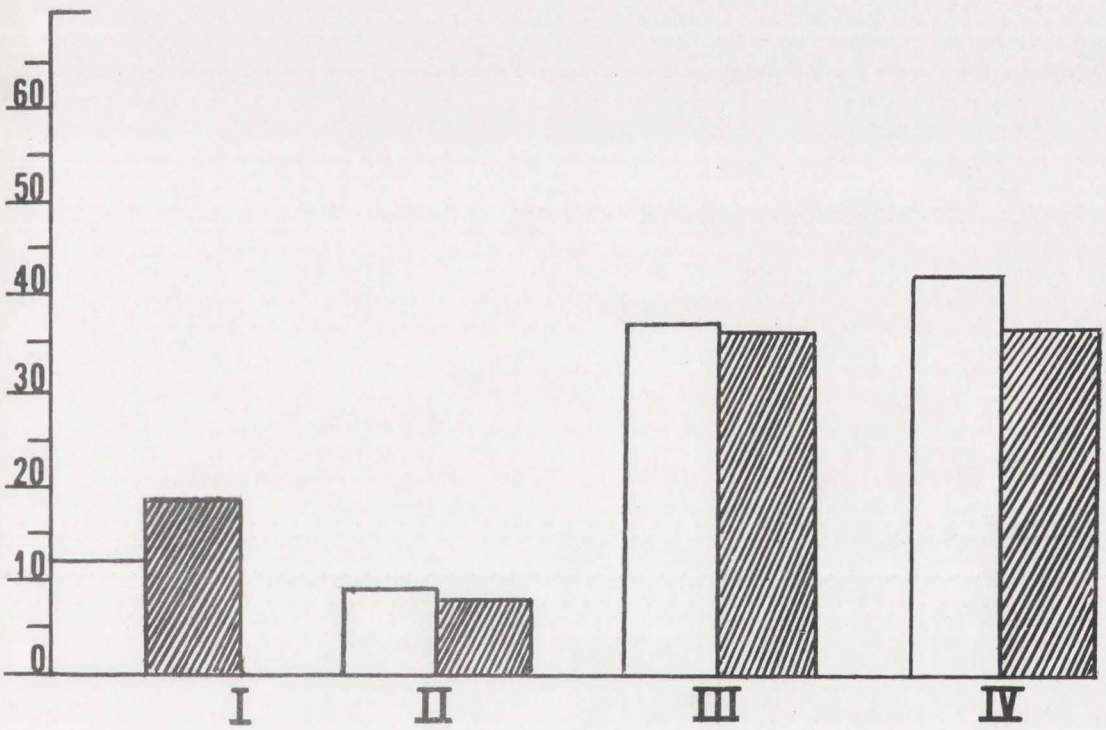


Fig. 9. Percentage of interaction occuring within each quadrant of the HIM for T.C.1. (feedback) and T.C.2. (training) of the treatment group.

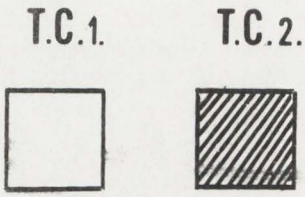


FIGURE 10.

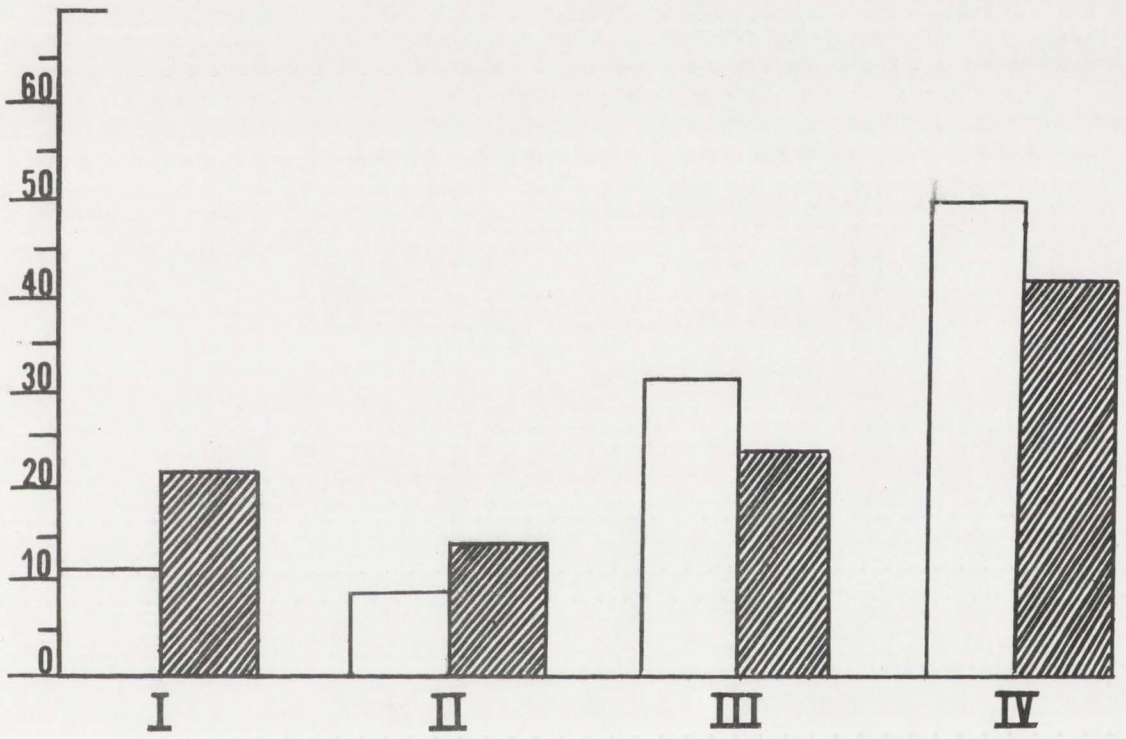


Fig. 10. Percentage of interaction occuring within each quadrant of the H I M for T.C.$1._a$ (no feedback) and T.C.$2._a$ (feedback) of the control group.

Examination of Figures 9 and 10 reveals there were no significant differences between the mean percentages of interaction occurring within respective HIM Quadrants for the comparisons made. This indicates that both the Treatment Group and the Control Group interacted in a similar manner during their respective treatment conditions, as measured by the HIM.

The mean percentages of interaction occurring in each of the HIM Quadrants for the Treatment Group and the Control Group were compared. This was done by combining percentage data of TC_1 (weeks 1 . . . 4, TG) and TC_2 (weeks 5 . . . 8, TG) and comparing it to the combined percentage data of TC_{1a} (weeks 1 . . . 4, CG) and TC_{2a} (weeks 5 . . . 8, CG). These data are shown in Figure 11.

FIGURE 11.

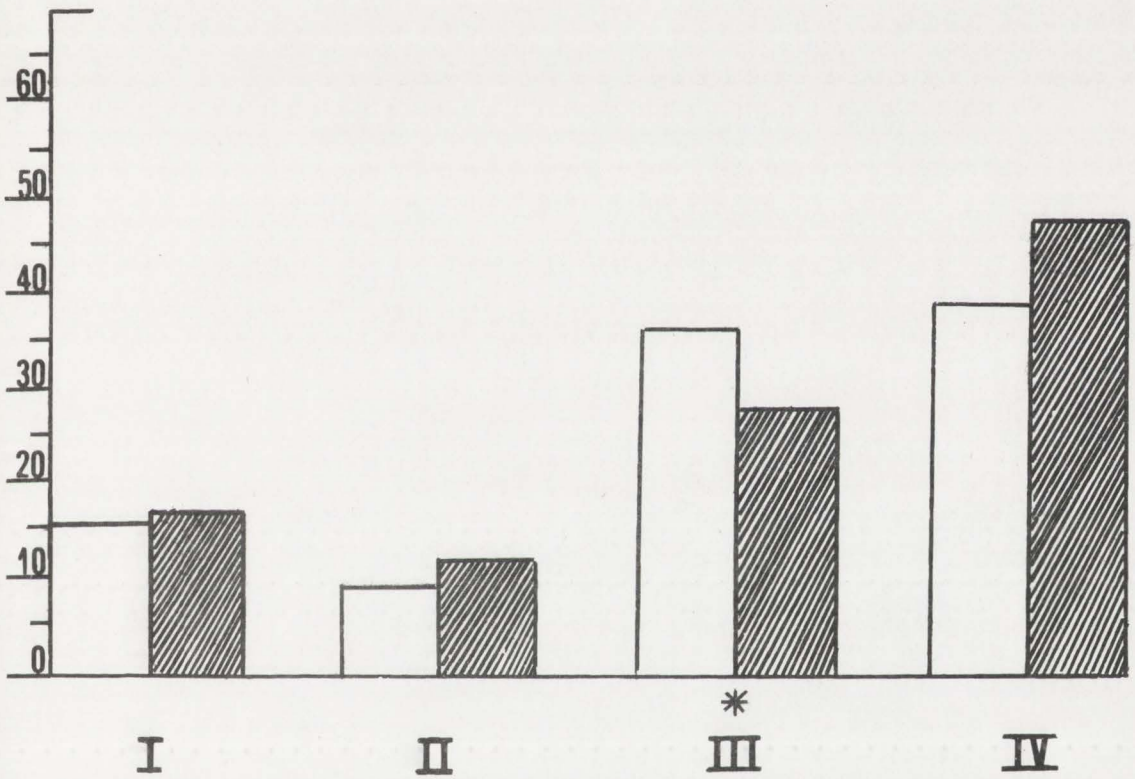


Fig. 11. Percentage of interaction occuring within each quadrant of the HIM for the treatment group, T.C.1. + T.C.2. and the control group, $T.C.1._a + T.C.2._a$.

$T.C.1._+T.C.2.$ $T.C.1._a+T.C.2._a$

* $P < .05$

* * $P < .01$

Examination of Figure 11 shows a significantly higher mean percentage of interaction occurred in Quadrant III for the Treatment Group than for the Control Group. This means that the Treatment Group interacted a significantly higher number of times in a Prework-Member Centered manner than did the Control Group. In the other Quadrants both groups tended to interact in a similar manner as measured by the HIM.

CHAPTER IV

DISCUSSION

As stated in the results, Factor A (Treatments) of the two-way analyses of variance yielded statistically significant differences on five of the 16 items on the Group Rating Scale. The S-comparisons of the means of these five items (3, 4, 7, 8, and 12) between corresponding treatment conditions, TC_1 to TC_{1a} (weeks 1 . . . 4) and TC_2 to TC_{2a} (weeks 5 . . . 8), revealed no significant differences (see Tables 2 and 3). The S-comparisons of these same item means between consecutive time intervals of the Treatment and Control Groups TC_1 to TC_2 (weeks 1 . . . 4 to weeks 5 . . . 8, TG) and TC_{1a} to TC_{2a} (weeks 1 . . . 4 to weeks 5 . . . 8, CG), revealed significant differences for several of these item means (see Tables 4 and 5). In both of these latter comparisons the significant differences were obtained during the week 4 . . . 8 time interval (TC_2 and TC_{2a}).

These significant differences, between the first four weeks of the study (weeks 1 . . . 4, TC_1 and TC_{1a}) and the last four weeks of the study (weeks 5 . . . 8, TC_2 and TC_{2a}), could have occurred through the effects of TC_2 (HIM training) and TC_{2a} (feedback). Referring to the Treatment Group, this would mean that HIM training (TC_2), as compared to only feedback (TC_1), is more effective in eliciting the type of personal and interpersonal interaction in encounter groups

which leads to group member's expressing a higher degree of satisfaction in the group processes. The same statement can be made, based on the results obtained, about the relationship of receiving feedback (TC_{2a}) to receiving no feedback (TC_{1a}), in reference to the Control Group. However, it cannot be stated with any certainty that these significant differences occurred as a result of the respective treatment conditions. On a rating scale containing 16 items it is possible for significant differences to occur on five items by chance alone, especially with the relatively small number of subjects involved. It is also possible that these significant differences occurred as a result of the number of group sessions in which the group members had participated. They may also have occurred as a result of members who were dissatisfied with the group process dropping out of the group.

Statistically significant differences were also discovered on five of the 16 items of the Group Rating Scale for Factor B (Sessions). As stated previously there was a general trend toward higher item means for these five items as the number of sessions increased (see Tables 6 and 10). This trend appears to be stronger for the Treatment Group than for the Control Group. Examination of Tables 6 and 10 also reveals the means of four of the five significant items for session one of the Treatment Group are lower than the respective item means for session one of the Control Group. It can also be observed that there is a decrease in the value of the item means for three of the five items

for the Treatment Group and for all five of the item means for the Control Group from session seven to session eight. It is possible that the reported satisfaction for the eighth session was effected in a negative manner by the fact that the groups would not meet again. These differences between item means may also be accounted for by the possibility that the members of the Treatment Groups did not place the same value on the rating scale items as did the members of the Control Group.

These findings based on the analysis of variance and S-comparison data indicate there were significant increases in reported member satisfaction in the group experience as a result of the number of sessions in which the group members participated. This reported satisfaction in most instances appears to have reached its highest value after the seventh group session followed by a decrease in this reported satisfaction after the eighth session.

The comparison of the data obtained from the Rating Scales of the group leader to the data from the Rating Scales of the group member's revealed several interesting incidental findings. The group leader was not made aware of the purpose of the research or of the different ways in which the two groups were treated.

The comparison of the group leader's rating data to that of the group members (see Figures 2, 3, 4, 5) reveals that the group leader reports his experience in the Treatment Group as being consistently

more satisfying than do the group members. The group leader also consistently reports his experience in the Control Group as being less satisfying, although his reported satisfaction did increase as the number of group sessions increased.

No definite reasons could be given for this unexpected difference in the group leader's ratings of the Treatment Group and Control Group. When these data were discovered, however, several speculations were made. It was possible that the expectations which the group members (who were naive as to group experience) had of the group were different than the expectations of the group leader. Examination of the data revealed considerably more variability within the rating data of the group members than within the rating data of the group leader. This raised the possibility that because of his training and experience it was possible for the group leader to be more objective and consistent in his rating's than were the group members. In addition, it is likely there would be less variability within the group leader's rating's as he would tend to place a similar value on all of the rating scale items. In contrast to this, it can be assumed that there would be some variability between the values placed on the different rating scale items by the various members of the Treatment and Control Groups. While all of these speculations were plausible, none seemed to account

adequately for the consistently large differences in the group leader's ratings of the Treatment and Control Groups. The analysis of the HIM data revealed a possible reason for this difference which is much more adequate and parsimonious.

The statistical analysis of the HIM data revealed significant differences between the mean percentage of interaction occurring in Quadrants II and III under TC_2 and TC_{2a} (see Figure 8). As can be seen, the Treatment Group had a significantly higher mean percentage of its interaction occurring in Quadrant III as compared to the Control Group. As Quadrant III has a higher therapeutic value than Quadrants I or II, this indicates that the Treatment Group was interacting in a more therapeutic manner, as measured by the HIM, than was the Control Group over weeks 5 . . . 8.

There are several possible explanations for these obtained results. One possible explanation for this is that receiving training in the HIM enabled the member's of the Treatment Group to better understand their pattern of interpersonal interaction. This understanding may then have enabled the members of the group to learn how to interact on a more personal and interpersonal level. However, examination of the data on Table 15 shows that the mean percentage of interaction in all four Quadrants of the HIM remained relatively the same for the Treatment Group during both TC_1 and TC_2. In contrast to this there was a large decrease in the mean percentage

of interaction occurring in Quadrants III and IV for the Control Group, and a corresponding increase in the mean percentage of interaction occurring in Quadrants I and II. Although this decrease is not statistically significant the probable reason for this is the small number of subjects in the Control Group during the last three weeks of the study.

It appears then, that the significantly high mean percentage of interaction occurring in Quadrant III, of the HIM, was a result of a decrease in interaction in this area by the Control Group rather than an increase by the Treatment Group. This change in interaction by the Control Group could also account for the group leader's expressing a higher amount of satisfaction in the performance of the Treatment Group. As the Treatment Group was interacting in a more therapeutic manner, as measured by the HIM, than was the Control Group, the group leader could be expected to rate the Treatment Group higher on the Group Rating Scale.

It appears that the results of the study were effected to some degree by the number of people who participated in the groups, both Treatment and Control. Both groups contained eight members plus the same group leader. At the end of TC_1 and TC_{1a} the Treatment Group and Control Group each had six members plus the group leader. No reason was given for not continuing in the groups by

the members who dropped out. An effort was made to contact those four individuals. Two of them stated intentions of returning and the remaining two could not be contacted.

During the last four weeks (TC_{2a}) of the study the Control Group lost an additional two group members, and as a result finished the study with a total of four group members plus the group leader. The Treatment Group did not lose any members during the last four weeks (TC_2) and so finished this study with six members plus the group leader.

This raises the question: Why did the Control Group lose more members than did the Treatment Group? There are several possible explanations for this. As no effort was made to control for differences between groups, members of the Control Group, by chance may have been loaded with individuals who for some reason were not acceptable to working in encounter groups. It is also possible that the groups were similar and as a result of HIM training the members of the Treatment Group were able to work through whatever obstacles they encountered to their group development. As the members of the Control Group did not have this resource available to them as an aid to their group development, group members may have chosen to drop from the group. This high rate of member dropout in the Control Group could have had a detrimental influence on the way in which the members of the group interacted with each other. The decrease of

interaction in Quadrants III and IV of the HIM, and increase of interaction in Quadrants I and II could have easily have resulted from this high rate of dropout from the Control Group.

CHAPTER V

CONCLUSIONS

The first hypothesis of this study stated, "There will be no significant differences between Control and Treatment Groups in expressed member satisfaction," Significant differences were found in expressed member satisfaction between Treatment and Control Groups. However, it cannot be stated definitely that these differences occurred as a result of treatment conditions.

Therefore, while the null hypothesis can be rejected, it cannot be definitively stated that these differences occurred as a result of treatment conditions.

The second hypothesis of this study stated, "There will be no significant differences in the therapeutic value of interaction between Treatment and Control Groups." Significant differences were found in the interaction indicating the Treatment Group interacted in a more therapeutic value in Quadrant III of the HIM, as compared to the Control Group. However, this difference appears to have occurred as a result of the interaction in the Control Group deteriorating. That is, under TC_1 and TC_{1a}, the Control and Treatment Groups interacted in a similar manner, as measured by the HIM. Under TC_2 and TC_{2a} the members of the Treatment Group interacted in a manner similar to the way they

did in TC_1, while the Control Group interacted more in Quadrants I and II and less in Quadrants III and IV. It can be conjectured, however, that the HIM training in some way influenced the members of the Treatment Group so as not to drop out of their group, as did the members of the Control Group.

Therefore, while the null hypothesis can be rejected, it cannot be definitively stated that these differences occurred as a result of treatment conditions.

These results, then, do not clearly indicate whether training members of short term encounter groups in use of the HIM results in more closely attaining the maximal therapeutic benefits possible from this type of experience. Perhaps further research will yield more positive information in this area.

CHAPTER VI

IMPLICATIONS FOR FURTHER RESEARCH

Several confounding variables were discovered during this study.

Two groups were used in this study, a Treatment and Control Group. Each of these groups were subjected to two different treatment conditions. The "feedback" condition of the treatment may have had a confounding effect on the "HIM training" condition. In a similar manner there may have been a confounding effect between the "no feedback" and "feedback" conditions within the Control Group. This could be controlled by employing three groups. One of the groups could be given no feedback for the length of the group. Another of the groups could be given feedback for its length. The third group could be given HIM training before the initial session.

An additional confounding effect may have resulted from members dropping out of the group during the study. This could be controlled by using a larger number of subjects in each group and by providing some inducement for the members of each group to remain in each group until the study is finished.

Questions can also be raised about the validity of the group rating scale employed. At present there are a number of such scales in existence which purport to sample some measure of

member satisfaction in the group process. Each of these scales is subject to the valid criticisms leveled at instruments which attempt to assess values which individuals place on group experience.

Finally, future research in this area may produce more positive results if an effort is made to control for differences between individuals within the groups and to control for possible differences between the groups. It was not possible to control for this variable in this study and this also may have been a confounding variable.

BIBLIOGRAPHY

Berenson, B. G., Carkhuff, R. R., and Myrus, P. The interpersonal functioning and training of college students. Journal of Counseling Psychology, 1966, 13 (4), 441-446.

Burke, R. L., and Bennes, W. G. Changes in perceptual of self and others during human relations training. Human Relations, 1961, 14, 165-182.

Carkhuff, R. R., and Banks, G. Training as a preferred mode of facilitating relations between races and generations. Journal of Counseling Psychology, 1970, 17 (5), 413-418.

Carkhuff, R. R., and Burman, R. Training as a preferred mode of treatment of parents of emotionally disturbed children. Journal of Counseling Psychology, 1970, 17 (2), 157-161.

Egan, G. Encounter: group process for interpersonal growth, 1970, Brooks Cole Publishing Company, Belmont, California.

Hill, W. F. Hill interaction matrix, a method of studying interaction in psychotherapy groups, 1965, Youth Study Center, University of Southern California.

Martin, S. C., and Carkhuff, R. R. Changes in personality and interpersonal functioning of counselors-in-training. Journal of Clinical Psychology, 1968, 24 (1), 109-110.

Perls, F., Hefferline, R. F., and Goodman, P. Gestalt therapy, 1951, Dell Publishing Co., New York.

Pierce, R., and Drasgow, J. Teaching facilitative interpersonal functioning to psychiatric patients. Journal of Counseling Psychology, 1969, 16, 295-298.

Snortum, J. R., and Myers, H. F. Intensity of t-groups relationships as a function of interaction. Proceedings of the 77th Annual Convention of the A. P. A., 1969, 4, Pt. 1, 455-456.

Stein, A. The nature and significance of interaction in group psychotherapy. International Journal of Group Psychotherapy, 1970, 2 (20), 153-162.

Sundberg, N. D., and Tyler, L. E. Clinical psychology, 1962. Appleton-Century-Crofts, New York.

Traux, C. B., and Carkhuff, R. R. Personality changes in hospitalized mental patients during group psychotherapy as a function of alternating sessions and vicarious pretraining. Journal of Clinical Psychology, 1965, 21, 225-228.

Traux, C. B., and Wargo, D. G. Effects of vicarious pretraining and alternating sessions on outcome in group psychotherapy with outpatients. Journal of Consulting and Clinical Psychology, 1969, 33 (4), 440-447.

Yalom, F. D. The theory and practice of group psychotherapy, 1970, Basic Books, Inc., New York.

APPENDIXES

APPENDIX A

Sample of Advertisement in Student Paper

ATTENTION STUDENTS:

Two encounter groups are being formed by the Psychology Department with the purpose of studying the process of group interaction. One group will meet on Tuesday night from 6:00 p.m. to 8:30 p.m., for nine weeks. The other group will meet on Thursday night from 6:00 p.m. to 8:30 p.m., for nine weeks. Anyone interested in participating in this project is requested to contact either the secretary of the Psychology Department or the secretary of the Counseling and Testing Center.

APPENDIX B

Group Rating Scale

GROUP RATING SCALE

(Circle the number you feel is closest to your feeling in regard to each item on the scale)

---

1. How satisfying did you find your experience in the group today?

1	2	3	4	5	6	7	8	9
completely dissatisfying								completely satisfying

2. How satisfying do you feel the experience was for the other group members?

1	2	3	4	5	6	7	8	9
completely dissatisfying								completely satisfying

3. How high is your feeling of trust in the group (i.e., how comfortable do you feel in disclosing your feelings to the other group members)?

1	2	3	4	5	6	7	8	9
no trust								complete trust

4. How high do you feel the other group members trust you?

1	2	3	4	5	6	7	8	9
no trust								complete trust

5. How effective do you feel the group is in eliciting here-and-now feelings?

1	2	3	4	5	6	7	8	9
completely ineffective								completely effective

6. How effective do you feel you are in eliciting here-and-now feelings from group members?

1	2	3	4	5	6	7	8	9
completely ineffective								completely effective

GROUP RATING SCALE (Continued)

---

7. How well do you feel accepted by the group members?

1	2	3	4	5	6	7	8	9
no acceptance								complete acceptance

8. How well do you feel you have accepted the other members of the group?

1	2	3	4	5	6	7	8	9
no acceptance								complete acceptance

9. How sensitive do you feel the other group members are to your feelings?

1	2	3	4	5	6	7	8	9
completely insensitive								completely sensitive

10. How sensitive do you feel you are to the feelings of the other group members?

1	2	3	4	5	6	7	8	9
completely insensitive								completely sensitive

11. How much do you feel that you belong to the group?

1	2	3	4	5	6	7	8	9
not at all								completely

12. How much insight do you feel that you have gained into yourself as a result of your experiences in the group?

1	2	3	4	5	6	7	8	9
no insight								complete insight

GROUP RATING SCALE (Continued)

13. How much do you feel that the members of the group have relied on the leaders for structure and guidance during the sessions?

1	2	3	4	5	6	7	8	9
complete reliance								no reliance

14. How well do you feel that the group members have participated in the group interactions?

1	2	3	4	5	6	7	8	9
no participation								complete participation

15. How well do you feel that you have participated in the group interactions?

1	2	3	4	5	6	7	8	9
no participation								complete participation

16. How much do you intend to change your pattern of interaction in future sessions?

1	2	3	4	5	6	7	8	9
no change								complete change

VITA

Dennis Randall Kilstrom

Candidate for the Degree of

Master of Arts

Thesis: Expressed Group Member Satisfaction and Measured Group Difference between Trained and Untrained Group Members

Major Field: Psychology

Biographical Information:

Personal Data: Born at St. Paul, Minnesota, November 16, 1941, son of Wesley O. and Helen M. Kilstrom; married Maxine E. Kaufman, October 9, 1965; three children, Brian Francis, Stephanie Ann, and Jennifer Sue.

Education: Attended elementary school in St. Paul, Minnesota; graduated from St. Mary's Seminary, Techny, Illinois, 1959; received Bachelor of Arts degree from University of Nebraska, Omaha, Nebraska, with a major in psychology, 1970.

Professional Experience: March, 1972 to present, psychometrist, Wyoming State Hospital, Evanston, Wyoming; September, 1971 to June, 1972, counseling psychology, internship, Community Action Program, Logan, Utah; January, 1971 to September, 1971, school counseling, practicum, Ellis School, Logan, Utah.